CITY OF SEATTLE
ENVIRONMENTAL MANAGEMENT PROGRAM
MANUAL

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CITY OF SEATTLE ENVIRONMENTAL MANAGEMENT PROGRAM

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EXECUTIVE SUMMARY

In late 1996, the City of Seattle initiated a project (the Environmental Management Initiative) to improve environmental performance in its daily operations. Given the City's size and its range of activities and services, the potential environmental impact of City operations is significant. After two years of work, a comprehensive Environmental Management Program (EMP) was approved by the City Council in January 1999. This program establishes environmental goals and policies, and provides a framework for improved management and accountability.

The EMP has been developed using a standard specification for environmental management systems, ISO 14001. This standard describes the elements of an effective environmental management system and is used by a growing number of leading public and private sector organizations in North America and worldwide.

Consistent with the standard, the City's EMP is based on a *plan-implement-check-improve* cycle and establishes:

1. A Citywide environmental policy and specific objectives based on an evaluation of the environmental aspects of City operations and associated legal requirements (plan);
2. A management structure and specific policies and procedures for achieving the goals and objectives, including clearly defined roles and responsibilities and training and communication requirements (implement);
3. Environmental indicators to monitor our progress (check); and
4. A process for continually improving our environmental performance through management review and corrective action (improve).

This document provides the framework for the EMP. It consists of three parts: Part A outlines the planning process and describes the management system for meeting the environmental policy; Part B details the environmental policies and performance indicators; and Part C identifies the specific work elements, by department, planned for the next two years to implement this management program.

Since this document represents a management system, it is, and will continue to be, a work in progress. Some sections will be expanded and more details filled in as the EMP is implemented. Departments, which must develop procedures to carry out the specific policies, are responsible for significant aspects of implementation. A major element of implementation and continuous improvement is employee awareness and involvement. Employees' ongoing participation in the program is key to its success. Revisions will be made as the City's EMP matures to reflect changes instituted to improve our performance in meeting the established goals.

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1 INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

The City of Seattle is recognized for its accomplishments in many environmental arenas such as recycling, electric energy and water conservation, and fish recovery and watershed management programs. To further the City's own environmental performance, in 1996 the Mayor and City Council established a special project to develop an Environmental Management Program (EMP), the goals of which were to:

- Ensure that the City of Seattle, as a corporate entity, incorporates a high level of environmental stewardship into its daily activities and complies with regulations;
- Prepare an Environmental Management Program (EMP) Manual that establishes Citywide environmental goals and policies and provides a framework for improved management and accountability;
- Develop and implement a municipal conservation program to make more efficient use of energy and water in City facilities; and
- Establish a process for measuring and reporting annually on environmental performance.

This document, the City of Seattle's Environmental Management Program (EMP) Manual,[1] is the outcome of that project. The purpose of the EMP is to establish a management system for improving environmental performance in the City's operations.

Background

As a city, Seattle's environmental issues arise in three separate contexts:

- City Operations: The City employs about 10,000 permanent employees. It owns several hundred facilities,[2] and approximately 7,000 acres of land within the City and over 128,000 acres elsewhere in the state. The City operates major industrial facilities in King, Whatcom, and Pend Orielle counties. Most of these facilities and operations are subject to numerous local, state, and federal environmental regulations.
- Programs and Services to City Residents: Through its regulatory authority and service delivery, the City's policy choices influence the quality of our local environment. For example, by offering recycling along with garbage collection to our citizens, we reduce the amount of land occupied by landfills and reduce methane gas contributions to global warming.
- Participation in Decision-Making of Other Governments: As the largest City in the region, Seattle can influence the policy choices of other governments through its "seat" on regional decision-making bodies, such as Sound Transit, and through participation in state and federal regulatory and legislative processes.

In each of these contexts the risks of mismanaging environmental issues are

[1] The program builds on the groundwork laid by the City's Environmental Priorities Project. That project, which was initiated in 1992, identified the key environmental issues in Seattle and outlined a series of actions to address them.

[2] The total number of "facilities" owned and operated by the City is in excess of 700. Facilities are defined as any improvement on a property. Of this, 325 are buildings.

significant. In addition to obvious risks such as environmental damage, public health threats, and reduced quality of life, there are also financial and legal consequences that can damage an organization's reputation. By implementing an effective environmental management system, an organization can manage these risks and systematically control the level of environmental performance that it sets for itself.

The City has chosen to develop this EMP based on the ISO 14001 standard (developed by the International Organization for Standardization). Recently adopted by the American National Standards Institute (ANSI), ISO 14001 is an international standard that outlines a system for organizations to:

1. Establish an environmental policy appropriate to the organization's environmental impacts and responsibilities;
2. Identify the environmental aspects arising from the organization's activities, products, or services to determine significant environmental impacts;
3. Identify the relevant legislative and regulatory requirements;
4. Identify priorities and set environmental objectives and targets;
5. Establish a structure(s) and a program(s) to implement the policy and achieve the objectives;
6. Manage planning, monitoring, and corrective action to ensure the system is achieving the intended results; and
7. Adapt the system to changing circumstances.

By following ISO 14001, the City is employing a standard that reflects international consensus on environmental management. Like other public and private entities using ISO 14001, Seattle's goal is to achieve a sustainable approach to its operations, that will "…meet the needs of the present without compromising the ability of future generations to meet their own needs."[3]

1.2 OVERVIEW OF SEATTLE'S ENVIRONMENTAL MANAGEMENT PROGRAM

The City is using a two-tiered approach to develop its EMP. This document represents the first tier by establishing the Citywide environmental management framework. The document also addresses the major elements called for in the ISO 14001 standard.

During the planning process for the Citywide framework, the City's environmental policy was developed, a general review of the environmental aspects of the City's operations was conducted, and legal requirements were assessed. This review served as the basis for identifying program goals and objectives and the scope and range of specific policies needed. Citywide environmental principles and objectives were then developed. Finally, a set of issue-specific policies and procedures were developed to provide minimum standards for City operations and to clarify roles and responsibilities for departments. These policies address the following environmental issues:

- Compliance Assessment
- Hazardous Waste Management
- Chemical Use
- Hazard Communication
- Abandoned Waste

[3] The World Commission on Environment and Development, *Our Common Future*, Oxford University Press, 1987.

- Property Transactions
- Site Remediation (*to be completed later)*
- SEPA Policy
- Sustainable Building *(to be completed later)*
- Petroleum Storage Tanks
- Energy and Water Conservation
- Waste Reduction and Recycling
- Landscaping and Grounds Management
- Environmentally Responsible Purchasing
- Fleet Management
- Emergency Response *(to be completed later)*
- Training *(to be completed later)*

The Citywide framework also establishes environmental performance indicators to monitor progress toward meeting the established objectives. Numeric targets have been set for two areas: regulatory compliance, and the use of fuels by City fleet vehicles. In addition, data will be collected and analyzed to determine whether the trends in the City's waste stream and use of materials, energy, water, and chemicals are progressing as expected.

Figure 1: Environmental Management Program

Environmental Management Program	
Citywide (Tier 1)	• Environmental policies and objectives • Management structure, responsibilities, and oversight • Performance indicators and targets • Monitoring, measurement, and corrective action • Biennial action planning
Departmental (Tier 2)	• Departmental procedures, including roles and responsibilities • Environmental aspects • Legal requirements • Departmental objectives and targets • Operational controls • Employee training and communication • Budget

The second tier will be developed as individual City departments undertake a more thorough review of the environmental aspects and legal requirements specific to their operations and develop procedures to implement this EMP at the departmental level,

including how they will meet the performance targets. Under this approach, departments retain their existing responsibilities for regulatory compliance and managing their daily operations while the EMP provides a Citywide framework for departments to meet Citywide standards.

As of 1999, the Office of Environmental Management (OEM) was established to oversee implementation of the EMP. In 2001 the Office of Environmental Management was renamed the Office of Sustainability & Environment (OSE). Central among its responsibilities is assisting individual departments to develop procedures to meet Citywide policies and objectives. Other responsibilities include collecting data, tracking environmental trends in City operations, and managing a program to make City facilities more energy and water efficient. An Environmental Oversight Committee (EOC) consisting of elected officials, City department directors, and community representatives will provide policy direction and accountability.

Environmental management is a dynamic process, based on a model of continual improvement. So too will the City's EMP be a continual and iterative process of planning, implementing, checking, modifying, and management review.

How to Use This EMP Manual

The purpose of this document is to serve as a user's manual for the City of Seattle's workforce to manage and improve the environmental aspects of the City's operations. Part A describes the City's EMP including its environmental policy and the organizational structure for the EMP. The EMP Manual is intended to provide the reader with an understanding of the direction in which the City is moving and how the City will realize its established goals.

Part B details the program's fundamental principles and establishes specific objectives, policies, and roles and responsibilities for implementation. This part of the manual defines expectations for departments and employees.

Part C contains the biennial action plan that describes the detailed tasks, and associated responsibilities, for implementing the EMP over the next two years.

2 PLANNING PROCESS

According to ISO 14001, the planning process begins with establishing an organization's environmental policy, followed by five additional steps:

1. Develop a procedure to identify environmental aspects of the organization's activities, products, or services, over which it has control, and determine those that have significant environmental impacts;
2. Develop a procedure to identify, understand, and maintain currency on all applicable environmental regulations, industry standards, agreements, etc.;
3. Establish objectives and targets;
4. Establish a program for achieving the objectives and targets; and
5. Establish a program for review and improvement.

2.1 ENVIRONMENTAL POLICY

The ISO 14001 standard provides the following definition for environmental policy statements:

Statement by the organization of its intentions and principles, in relation to its overall environmental performance, which provides a framework for action and for the setting of its environmental objectives and targets. (Source: ISO 14001, Section 3.9)

An organization's environmental policy is a statement of its values and is intended to provide the framework for establishment of its environmental objects and targets, as well as for the detailed procedures that guide implementation of its environmental management system.

The City of Seattle's guiding environmental policy is to conduct its operations in an environmentally responsible and sustainable manner; to comply with environmental laws and regulations; to reduce its use of resources and generation of waste; and to lead by example.

Additional Citywide policies and procedures that address specific environmental aspects and legal requirements are contained in Sections 6.1 through 6.17.

2.2 SUMMARY OF ENVIRONMENTAL ASPECTS

The ISO 14001 standard specifies the following for environmental aspects:

The organization shall establish and maintain a procedure(s) to identify the environmental aspects of its activities, products or services that it can control and over which it can be expected to have an influence, in order to determine those which have or can have significant impacts on the environment. (Source: ISO 14001, Section 4.3.1)

Environmental aspect—Elements of an organization's activities, products, or services that can interact with the environment.

Environmental impact—Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products, or services.

The City of Seattle covers 84 square miles and has a population of 532,900. As a municipality, it provides services and regulates certain activities such as land use and construction. The primary functions of the City include:

- police and fire services
- land use planning and regulation of construction
- parks, open space, and recreational services
- municipal court
- utility services including electricity, water, drainage and wastewater, and solid waste
- housing and human services for low-income families
- libraries
- road and bridge maintenance and traffic control

A general review of the environmental aspects of the City's activities, products, and services was conducted. The purpose of this review was to ensure that the scope and direction of the environmental policies and objectives would be appropriate. This review focused on activities, products, and services that could result in:

- release or emission of pollutants to air, land, or water;
- production of solid or hazardous waste;
- contamination of land;
- adverse impacts to habitat, wildlife, human health, or quality of life; and
- depletion of natural resources.

The results of this assessment are summarized in Figure 2.

Figure 2: City of Seattle Activities that Impact the Environment

ACTIVITY	ENVIRONMENTAL ASPECT	POTENTIAL ENVIRONMENTAL IMPACT
Shops and Facility Maintenance Activities: • Bridge Maintenance • Carpentry • Electrical • Painting and Sand Blasting • Plumbing • Printing • Street Maintenance • Vehicle and Motor Repair	• Use of solvents, paints, oils, grease, fuels, asbestos, adhesives, antifreeze, sealants, and other chemicals • Storage of flammable and hazardous chemicals • Transportation and disposal of chemicals, lead paint waste, asbestos brake material, contaminated rags, and other hazardous material	• Contamination of land and water due to spills • Human health effects from worker exposure to toxic chemicals and possible fires • Risk to human health and the environment from transportation and disposal of hazardous materials • Noise pollution

ACTIVITY	ENVIRONMENTAL ASPECT	POTENTIAL ENVIRONMENTAL IMPACT
Industrial Facility Operations: • Transfer Stations • Dams • Electrical Substations • Reservoir Management • Water Treatment	• Hazardous waste handling • Use and storage of solvents, paints, chlorine and other hazardous chemicals • Storage of hazardous chemicals • Transportation and disposal of hazardous waste • Stream flow manipulation and water retention	• Contamination of land and water due to spills • Risk of fire • Noise pollution • Air quality degradation • Human health effects from worker or public exposure to toxic chemicals • Loss of endangered species and loss of or creation of wildlife habitat
Landscaping and Grounds Maintenance: • Mowing • Planting • Irrigation • Weed Control • Fertilizing • Pruning	• Use, storage, and disposal of hazardous chemicals • Clean green disposal • Energy and water use • Power equipment use	• Contamination of water bodies from migration of herbicides, pesticides, and fertilizers • Contamination of land and water due to spills • Natural resource depletion • Soil erosion • Loss of beneficial organisms • Wildlife habitat creation or destruction • Human health effects from worker and public exposure to toxic chemicals • Air emissions and noise pollution from use of power equipment • Risk to human health an the environment from transportation and disposal of hazardous materials
Remediation of Contaminated Sites: • Soil and debris removal • Groundwater removal • Contamination containment • Soil or water treatment • Transportation and disposal of hazardous waste	• Use of heavy equipment • Hazardous waste handling • Potential release during remediation activities	• Human health effects from worker or public exposure to toxic chemicals • Contamination of air, land, and water due to releases • Reduced risk of human health and environmental effects from exposure to toxic chemicals in the environment • Restoration of wildlife habitat

ACTIVITY	ENVIRONMENTAL ASPECT	POTENTIAL ENVIRONMENTAL IMPACT
Petroleum Storage Tanks: • Transportation and storage of petroleum products • Fuel delivery • Fuel dispensing	• Hazardous materials handling	• Soil, surface water, or groundwater contamination due to spills • Human health effects from worker or public exposure to toxic chemicals
Special Waste Streams and Waste Handling Facilities: • Small Quantity Generator Sites • Moderate Risk Waste Facilities • PCB wastes • Biohazard wastes • Household Hazardous Waste Facilities • Food Service Wastes	• Hazardous waste handling Potential for spills and fires • Storage, transportation, and disposal of hazardous wastes	• Human health effects from worker or public exposure to toxic chemicals • Soil, surface water, or groundwater contamination due to spills
Resource Consumption: • Paper • Fuels (Gas & Diesel) • Electricity • Water	• Product manufacturing and transportation • Waste disposal • Generation, transmission, and distribution of resources	• Contribution to climate change • Natural resource depletion • Water quality and quantity impacts
Stormwater Management: • Collection and diversion of stormwater	• Combined sewer overflows • Paving and construction • Storm drain outfalls	• Increased erosion and slide potential • Decreased water recharge • Degradation of groundwater, streams, and marine and surface water
Construction Activities: • Land clearing • Utility installation and maintenance • Facility construction	• Heavy equipment use • Excavation and filling • Fugitive dust emissions • Stormwater runoff • Transportation and disposal of wastes	• Noise pollution • Soil erosion • Surface water quality degradation • Loss of endangered species and loss of or creation of wildlife habitat • Degradation of sensitive environments • Human health effects form worker and public exposure to toxic chemicals • Reduced green space

This figure summarizes City facilities and operations that have the potential to impact the environment. Departments will need to establish their own procedures for identifying environmental aspects and evaluating the significance of the impacts that their operations have on the environment.

2.3 LEGAL REQUIREMENTS

The ISO 14001 standard specifies the following for legal requirements:

The organization shall establish and maintain a procedure to identify and have access to legal and other requirements to which the organization subscribes, that are applicable to the environmental aspects of its activities, products or services. (Source: ISO 14001 Section 4.3.2)

Numerous environmental laws and regulations govern the City's diverse activities. In addition to being regulated, the City also acts as a regulator of environmental aspects, including, for example, land use and construction. City departments are responsible for determining what regulations apply to their activities and ensuring compliance. The City Attorney's Office advises departments in identifying applicable regulations and their effect on operations and, along with the Office of Environmental Management, will assist departments in tracking changes to environmental regulations affecting operations.

Appendix C provides an overview of federal, state, and local environmental regulations that apply to City operations. This list is not intended to be comprehensive but instead demonstrates the scope of applicable regulatory requirements.

2.4 ENVIRONMENTAL OBJECTIVES AND TARGETS

The ISO 14001 standard specifies the following for objectives and targets:

The organization shall establish and maintain documented environmental objectives and targets, at each relevant function and level within the organization…. The objectives and targets shall be consistent with the environmental policy, including the commitment to prevention of pollution. (Source: ISO 14001 Section 4.3.3)

Environmental objective: An overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and which is quantified where practicable. (Source: ISO 14001, Section 3.7)

Environmental target: A detailed performance requirement, quantified where practicable, applicable to the organization or parts thereof; that arises from the environmental objectives and that needs to be…met in order to achieve those objectives.
(Source: ISO 14001, Section 3.10)

For the City to improve its environmental performance, to simply provide policy direction is not sufficient. Objectives and a means for measuring performance are necessary to evaluate progress and make improvements. Performance metrics, including environmental indicators and targets provide a tangible means for assessing whether or not the environmental objectives are being achieved.

Figure 3 provides an example of how City policy, objectives, environmental indicators, and targets are related.

Figure 3: Example of How Environmental Policy, Objectives, Targets, and Environmental Indicators are Integrated

Policy	It is the policy of the City of Seattle to conduct its operations in an environmentally responsible and sustainable manner; to comply with environmental laws and regulations; to reduce its use of resources and generation of waste; and to lead by example.
Objective	To work proactively to comply with all applicable environmental laws and regulations.
Environmental Indicators	Regulatory Violations. Facility Site Visits. Compliance Assessments.
Targets	No violations or fines. No uncontrolled environmental releases. All facilities with environmental aspects inspected biennially. All corrective actions to address facility non-compliance completed on schedule.

Section 5.1 contains the City's environmental objectives.

The environmental indicators that will be used to evaluate environmental performance along with associated targets are contained in Section 5.2.

3 IMPLEMENTATION FRAMEWORK

3.1 MANAGEMENT STRUCTURE AND RESPONSIBILITIES

The ISO 14001 standard specifies the following for environmental management structure and responsibility:

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

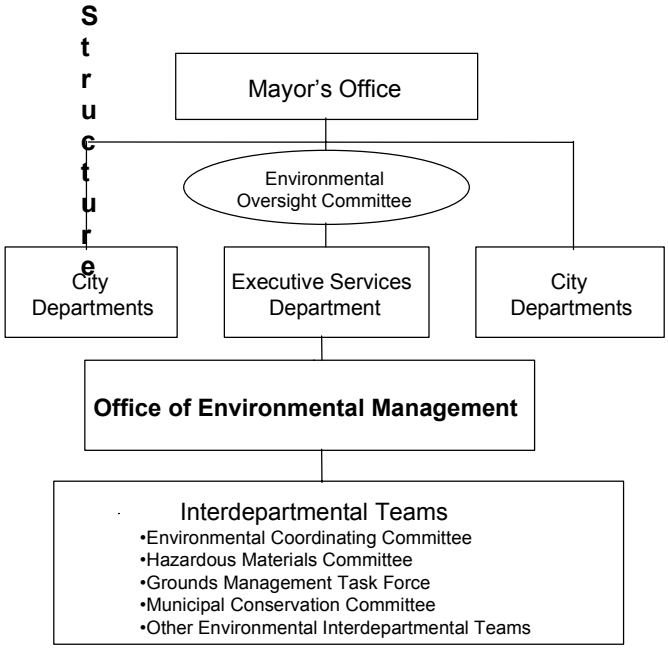
Management shall provide resources essential to the implementation and control of the environmental management system….

The organization's top management shall appoint (a) specific management representative(s) who…shall have defined roles, responsibilities and authority for:

(a) ensuring that environmental management system requirements are established, implemented and maintained in accordance with this International Standard;

(b) reporting on the performance of the environmental management system to top management for review and as a basis for improvement of the environmental management system. (Source: ISO 14001, Section 4.4.1)

Figure 4: EMP Organizational



The City's management structure for implementing its Environmental Management Program (EMP) is depicted graphically in Figure 4. The roles and responsibilities for each of the major groups are described below:[4]

Environmental Oversight Committee (EOC)

This EOC consists of top management, elected officials, and community leaders. The panel is responsible for the success of the City's EMP and for ensuring this program is integrated effectively with other City goals and priorities. The EOC is also responsible for reviewing the City's EMP Manual on at least an

[4] See Appendix B for a more complete description of roles and responsibilities.

annual basis to ensure its continued suitability, adequacy, and effectiveness, and for recommending changes to the EMP based on its review.

Office of Sustainability & Environment (OSE)

The OSE guides City government operations toward sustainability by coordinating implementation of this environmental management program. The OSE provides a focal point in City government for developing environmental policies, setting priorities, and facilitating interdepartmental teamwork on shared environmental issues. The OSE is also responsible for reporting to elected officials and the community on the City's environmental performance.

Specific duties and responsibilities include the following:

1. Work with departments to develop and implement Citywide environmental policies and procedures (Section 6 of the EMP Manual).
2. Coordinate Citywide process for setting and reporting on environmental performance (Sections 2.4 and 5.2 of the EMP Manual). Report annually to elected officials on progress and challenges.
3. Advise Executive on environmental priorities and assist in setting long-term policy direction.
4. Assist departments and Executive in preparation of Biennial Environmental Action Plan (Part C of the EMP Manual) consistent with those priorities.
5. Manage the Municipal Conservation Project to retrofit City facilities to be more energy and water efficient (Section 6.11, Energy and Water Conservation Policy).
6. Facilitate communication and joint problem solving among City departments.
7. Provide leadership and staff support to interdepartmental environmental teams.
8. Serve as a clearinghouse for environmental information.
9. Develop and lead interdepartmental programs in the areas of compliance assessment, chemical use, energy and water conservation, and landscape management (Sections 6.1, 6.3, 6.11, 6.13).
10. Assist departments with training of employees.
11. Prepare a biennial environmental report for distribution to employees and the community.
12. Conduct employee outreach activities including maintaining an Environmental Management Program website.

City Departments

Each City department is responsible for managing the environmental aspects of its operations in a manner consistent with the framework established by this EMP, and in compliance with applicable environmental regulations. Departments with significant environmental aspects shall appoint a senior manager to oversee and coordinate these responsibilities. In addition, department directors are responsible for:

1. Communicating and ensuring their department's conformance with the City's environmental principles and policies (Sections 5 and 6).
2. Analyzing and documenting significant environmental aspects associated with their department's operations.
3. Understanding legal and other requirements that apply to their department's operations.
4. Developing departmental policies and procedures to implement the Citywide environmental management program.

5. Establishing management performance and operational performance indicators (MPIs and OPIs) and assessing departmental performance against targets.
6. Ensuring departmental employees have the necessary skills, training, and resources to effectively implement the environmental management program.
7. Supporting interdepartmental teams and activities to improve efficiency and consistency in managing environmental issues.

Interdepartmental Teams

While each department's mission is unique, the environmental aspects of departmental operations are not. The City has centralized some functions associated with environmental management (e.g., contracts for disposal of hazardous waste). Interdepartmental teams provide an effective means to increase efficiency and consistency in environmental management short of centralizing functions. The City currently has four interdepartmental committees responsible for coordinating resources and developing solutions for Citywide environmental issues.

Environmental Coordinating Committee (ECC) The purpose of the ECC is to provide a forum for City managers to discuss, coordinate, and resolve environmental issues of mutual interest and concern.

Hazardous Materials Committee (HMC) The HMC is a technical committee responsible for coordinating activities and improving management of the City's hazardous materials and waste stream.

Municipal Resource Conservation Committee (MRC) The MRC is a technical committee responsible for coordinating activities related to energy and water conservation investments and programs for City-owned facilities.

Grounds Management Task Force (GMTF) This task force is a technical committee responsible for coordinating activities and improving practices related to management of City grounds and landscapes.

Additional interdepartmental committees or task forces will be established as needed to facilitate resolution of shared environmental issues, and to more efficiently utilize staff expertise.

3.2 TRAINING

The ISO 14001 standard specifies the following for environmental training:

The organization shall identify training needs. It shall require that all personnel whose work may create a significant impact on the environment have received appropriate training.

It shall establish and maintain procedures to make its employees…aware of [:]

(a) the importance of conformance with the…requirements of the environmental management system;

(b) the significant impacts…of their work activities and the environmental benefits of improved personal performance;

(c) their roles and responsibilities in achieving conformance with the… requirements of the environmental management system;

(d) the potential consequences of departure from specified operating procedures.

(Source: ISO 14001, Section 4.4.2)

The City will establish and maintain a training program to ensure that employees throughout the organization understand the Environmental Management Program (EMP). The OSE will be responsible for developing a training plan that meets the requirements of ISO 14001.

The OSE will work with the interdepartmental teams to coordinate the planning and delivery of training related to specific operations that have Citywide significance.

Department directors will be responsible for identifying and delivering training specific to job functions within their departments and ensuring that appropriate refresher training is also provided. Department directors are also responsible for maintaining records for departmental training related to the EMP.

Completion of a Citywide policy on environmental training and a training plan are identified in the biennial action plan.

3.3 COMMUNICATION

The ISO 14001 standard specifies the following for communication within the EMP:

With regard to its environmental aspects and environmental management system, the organization shall establish and maintain procedures for[:]

(a) internal communication between the various levels and functions of the organization;

(b) receiving, documenting, and responding to relevant communication from external interested parties.

The organization shall consider processes for external communication on its significant environmental aspects and record its decision. (Source: ISO 14001, Section 4.4.3)

The OSE will develop a communication plan that reaches City employees at all levels of the organization, citizens, regulatory agencies, and other stakeholders. The City's goals for communication under the Environmental Management Program (EMP) are to:

- Demonstrate commitment to its established environmental policy and principles;
- Inform employees about, and involve employees in, the development and implementation of the EMP;
- Inform citizens and other external parties about the EMP;
- Raise awareness of the City's environmental performance toward achieving objectives and targets;
- Proactively address concerns and questions about the City's environmental performance; and
- Obtain input from employees and the public for continual improvement of the City's environmental performance and the EMP.

The OSE will be responsible for communications about overall environmental performance through a biennial environmental report, which will be made available to the public. The format of this report will be consistent with the Public Environmental Reporting Initiative (PERI) guidelines.

Other communication tools that may be incorporated into the communication plan include:

- Priority memos from the Mayor and department directors

- Employee recognition programs
- Employee newsletters
- Employee forums and brown-bags
- Web page on the intranet and Public Access Network
- Public Access Channel 28
- Media releases

Department directors will be responsible for addressing communications within their departments to ensure that employees understand departmental policies and procedures affecting environmental management.

Completion of a communication plan is identified in the biennial action plan.

3.4 DOCUMENTATION AND DOCUMENT CONTROL

The ISO 14001 Standard specifies the following for EMP documentation and document control:

The organization shall establish and maintain information, in paper or electronic form, to[:]

(a)describe the core elements of the management system and their interaction;

(b)provide direction to related documentation.

The organization shall establish and maintain procedures for controlling all documents required by this International Standard… (Source: ISO 14001, Section 4.4.4 and Section 4.4.5)

This document, Seattle's EMP Manual, is intended to establishes the frame-work for the City's EMP and to meet the ISO 14001 documentation specification. The OSE will maintain the EMP Manual as well as the biennial report, biennial action plan, work plans, records of the EOC and interdepartmental teams, and other correspondence and documents of a Citywide nature.

Department directors will establish document control procedures for departmental policies and procedures, work plans, permits, documentation of environmental aspects and legal requirements, and records of correspondence with regulatory agencies that pertain to the EMP.

Completion of a document control plan is identified in the biennial action plan.

3.5 OPERATIONAL CONTROLS

The ISO 14001 standard specifies the following for environmental operational controls:

The organization shall identify those operations and activities that are associated with the identified significant environmental aspects in line with its policy, objectives and targets. The organization shall plan these activities, including maintenance, in order to ensure that they are carried out under specified conditions by[:]

(a)establishing and maintaining documented procedures…;

(b)stipulating operating criteria in the procedures;

(c)establishing and maintaining procedures related to the identifiable significant environmental aspects of goods and services used by the organization and communicating relevant procedures and requirements to suppliers and contractors. (Source: ISO 14001, Section 4.4.6)

In order to ensure that the EMP is followed and its objectives are achieved, operations with significant environmental aspects need to be controlled. Operational controls can help ensure regulatory compliance and consistent environmental performance. Operating criteria may take the form of documented procedures, special training, or inspections. For example, in order to implement the policies found in Section 6, program plans, procedure manuals, training, and other controls may be developed. The biennial action plan identifies some of the tasks involved in developing operational controls for the various policies developed to date.

3.6 EMERGENCY RESPONSE

The ISO 14001 standard specifies the following for emergency response:

The organization shall establish and maintain procedures to identify potential for and respond to accidents and emergency situations, and for preventing and mitigating the environmental impacts that may be associated with them. (Source: ISO 14001, Section 4.4.7)

The City's existing policies and procedures for emergency response will be evaluated and revised to ensure that they adequately account for potential environmental impacts. The OSE will be responsible for working with the City Emergency Management Office to develop an emergency preparedness and response policy for the EMP.

Department directors will be responsible for developing policies and procedures for responding to any environmental emergency likely to arise from their operations, e.g., oil spills, pesticide releases, etc.

Completion of an emergency response plan is identified in the biennial action plan.

4 MONITORING AND CORRECTIVE ACTION

4.1 MONITORING PERFORMANCE AND COMPLIANCE

The ISO 14001 standard specifies the following for monitoring and measurement:

The organization shall establish and maintain documented procedures to monitor and measure… the key characteristics of its operations activities that can have a significant impact on the environment. (Source: ISO 14001, Section 4.5.1)

Monitoring environmental performance is a process of tracking environmentally significant characteristics associated with the City's operations and evaluating progress toward meeting environmental objectives. Environmental performance indicators are selected to represent the characteristics of the City's operations that are critical to achieving the objectives. Collecting environmental performance data will provide the City with a quantitative framework to evaluate environmental performance. This performance data will be used to track progress and indicate the need or requirement to implement corrective actions when progress is not being realized.

Monitoring environmental performance is a key management tool for focusing attention—what gets measured gets managed. It is also a critical aspect of the feedback loop because it provides information on whether programs are achieving their intended results. This information provides the basis for management review and corrective action.

4.2 CORRECTIVE ACTION

The ISO 14001 standard specifies the following for corrective action:

The organization shall establish and maintain procedures for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate, and completing corrective and preventive action. (Source: ISO 14001, Section 4.5.2)

The City will develop a process to promptly resolve nonconformance with the policies and procedures identified in this program. Environmental performance indicator (EPI) monitoring, and compliance assessment findings will provide the basis for identifying nonconformance issues. These issues will be reviewed periodically by the Environmental Oversight Committee (EOC).

The corrective action process will include procedures for defining responsibility and authority for addressing nonconformances, mitigating environmental impacts, identifying root causes, implementing corrective and preventive action, establishing due dates, and making necessary changes to documented procedures.

Completion of a corrective action plan is identified in the biennial action plan.

4.3 RECORDS

The ISO 14001 standard specifies the following for maintaining environmental records:

The organization shall establish and maintain procedures for the identification, maintenance and disposition of environmental records. (Source: ISO 14001, Section 4.5.3)

The Office of Sustainability & Environment (OSE) will be responsible for maintaining records on Citywide environmental performance, e.g., documentation needed to track the biennial action plan and prepare the biennial report, compliance assessment corrective action plans, etc.

The City Attorney's Office will be responsible for maintaining records on regulatory violations, enforcement actions, and other legal actions involving the City's environmental performance.

Department directors will be responsible for maintaining records required by environmental regulations, departmental training records, and records documenting departmental environmental performance.

Completion of a record keeping plan is identified in the biennial action plan.

4.4 MANAGEMENT SYSTEM AUDITS

The ISO 14001 standard specifies the following for audits of the Environmental Management Program (EMP):

The organization shall establish and maintain (a) program(s) and procedures for periodic management system audits to be carried out in order to:

(a)determine whether or not the environmental management system 1) conforms to planned arrangements for environmental management including the requirements of this International Standard; and 2) has been properly implemented and maintained; and

(b)provide information on the results of audits to management.

(Source: ISO 14001, Section 4.5.4)

An Environmental Management System (EMS) audit is a systematic evaluation of an organization's conformance to the policies, practices, procedures, and other requirements established by its environmental management program. EMS audits differ from compliance audits, the purpose of which is to determine compliance with applicable legal requirements (see Section 6.1 of the EMP Manual). EMS audits are intended to determine whether the City is properly implementing and maintaining its EMP and identify areas of potential improvement. In addition, the results of an EMS audit are an important part of the internal management review process to ensure the continuing effectiveness of the City's EMP.

Development of a management system audit program is identified in the biennial action plan.

4.5 MANAGEMENT REVIEW

The ISO 14001 standard specifies the following for management review:

The organization's top management shall, at intervals that it determines, review the environmental management system to ensure its continuing suitability, adequacy, and effectiveness. (Source: ISO 14001, Section 4.6)

The EMP will undergo periodic management review to ensure continual improvement is achieved. The management review will include consideration of the following:

- Objectives and targets
- Compliance assessment findings
- Management system audit findings
- Concerns of key stakeholders

The OSE has lead responsibility for monitoring Citywide performance and compliance with this EMP. Key tools for assessing performance include the environmental indicators and targets contained in Section 5.2; the compliance assessment program described in Section 6.1; and the Biennial Action Plan contained in Part C. Interdepartmental teams are responsible for assisting the OSE in carrying out this function.

The EOC is responsible for reviewing this information to evaluate the suitability of the policy and the need for changes to the EMP. Based on this review, the EOC will recommend appropriate actions to keep the EMP on track to achieve its objectives.

Department directors are responsible for establishing monitoring and corrective action programs for assessing performance of their operations against environmental objectives.

PART B

ENVIRONMENTAL POLICY AND PERFORMANCE OBJECTIVES

5 ENVIRONMENTAL POLICY, OBJECTIVES, AND MONITORING

5.1 ENVIRONMENTAL POLICY AND OBJECTIVES

It is the policy of the City of Seattle to conduct its operations in an environmentally responsible and sustainable manner; to comply with environmental laws and regulations; to reduce its use of resources and generation of waste; and to lead by example. (Section 2.1)

The following principles elaborate on this policy and describe how the City will conduct its business in seeking to achieve its environmental objectives:

- Work proactively to comply with all applicable environmental laws and regulations;
- Identify environmental targets that represent performance beyond regulatory compliance, and strive to meet or exceed them;
- Review our environmental performance against targets and objectives annually and identify opportunities for continued improvement;
- Manage our operations to avoid or minimize impacts to the ecosystems we depend upon;
- Factor in the economic and environmental costs, risks, benefits, and impacts, from a life cycle perspective, when making planning, contracting, purchasing, and operating decisions;
- Reduce the quantity and toxicity of materials used and waste generated from our facilities and operations through source reduction, reuse, and recycling;
- Design, construct, and operate City facilities to minimize environmental impacts by incorporating energy efficiency, water conservation, waste minimization, pollution prevention, and resource-efficient materials through all phases of a facility's life.
- Seek the commitment of all employees to environmental stewardship through communication, training, and support for employee leadership;
- Involve our citizens in improving our environmental performance;
- Develop and maintain cooperative relationships with regulatory agencies and tribal governments;
- Collaborate with other organizations to achieve shared environmental goals.

The planning process (described in Section 2) included establishing the City's environmental policy, reviewing the general environmental aspects of operations, and identifying the associated legal requirements. Based on the results of that process and consistent with the policy statement and associated principles, the following objectives were established. The objectives provide direction for developing specific policies and procedures and form the basis for monitoring our progress.

The City's environmental objectives are to:

- Comply with regulations;
- Reduce pollution at the source;
- Reduce consumption of resources; and
- Continually improve environmental performance.

The specific environmental policies and procedures found in Section 6 address the City's activities, products, and services that have potentially significant environmental impacts. These policies and procedures provide policy direction for departmental operations and clarify roles and responsibilities. Implementation of the procedures is intended to move the City toward achieving its environmental objectives.

5.2 ENVIRONMENTAL INDICATORS AND TARGETS

This section of the Environmental Management Program (EMP) Manual describes how the City will "keep score" of its environmental performance. Environmental indicators serve as part of an organization's feedback loop, indicating the effectiveness of actions and programs in achieving its objectives. Environmental indicators also serve as a way to communicate clear information to the stakeholders about the City's progress.

ISO 14031 (now a draft international standard) is the member of the ISO 14000 series of standards that addresses environmental performance. The draft ISO 14031 guidance classifies environmental indicators into two categories:

- Environmental Condition Indicators (ECIs)
- Environmental Performance Indicators (EPIs)

ECIs relate to local, regional, or global measures regarding the condition of the environment. Ambient air quality parameters are an example. Several of these types of indicators are identified for the City in *"Seattle's Comprehensive Plan—Monitoring Our Progress"* (1996).

EPIs relate to the activities and outputs that can affect ECIs. Air emissions from the City's fleet vehicles are an example.

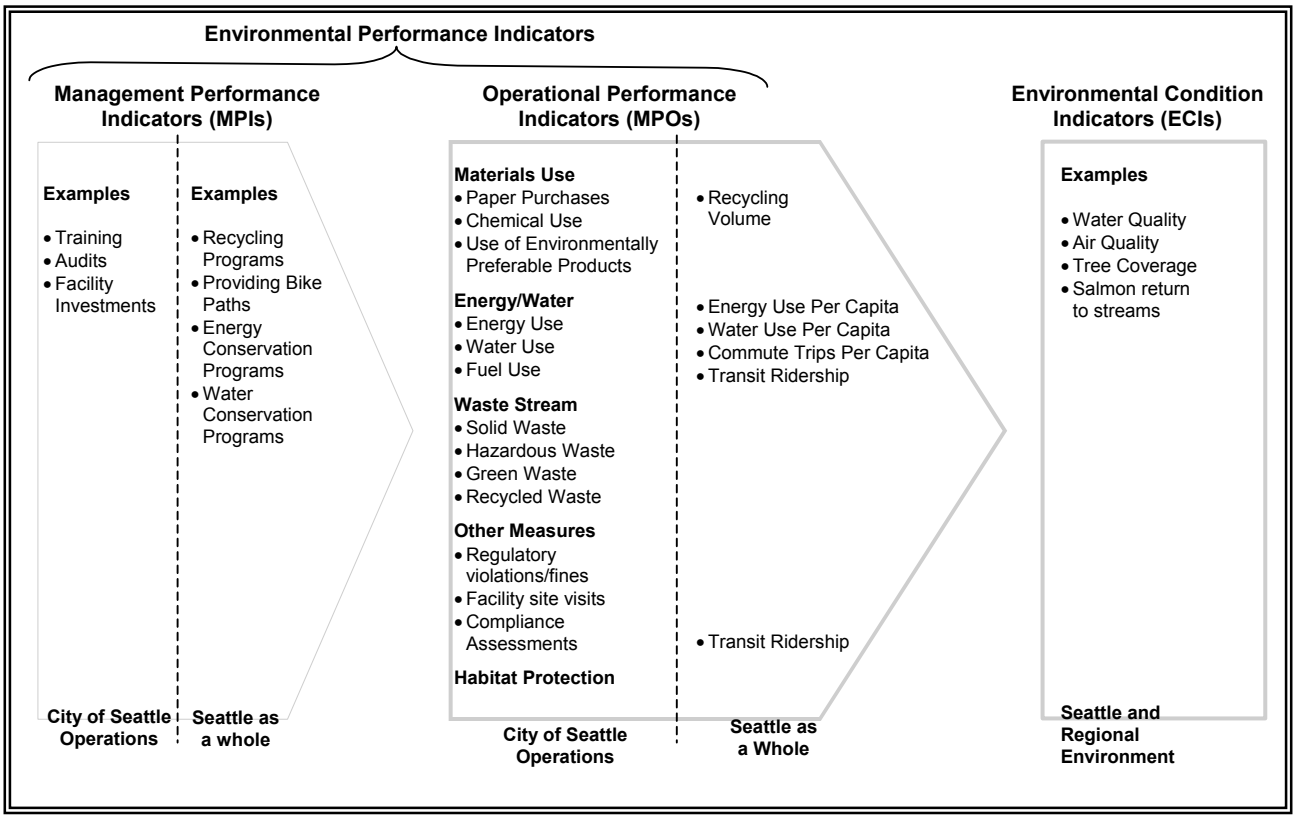
ISO 14031 further divides EPIs into two sub-categories:

- Operational Performance Indicators (OPIs)
- Management Performance Indicators (MPIs)

OPIs are the most direct measures of environmental performance. This type of indicator measures the actual output or load that the organization is placing on the environment.

MPIs can be considered leading indicators of environmental performance. This type of metric measures those program activities undertaken by management with the goal of improving OPIs (the actual load placed on the environment). For example, in order to decrease the use of energy and water (and thus the actual load on the environment), programs might be implemented to retrofit City facilities to improve energy or water efficiency, employees might attend training courses on conservation, or energy and water audits might be conducted. Improved environmental performance can ultimately be expected to improve environmental conditions, which are measured by ECIs. These linkages are illustrated in Figure 5.

Figure 5: City of Seattle Environmental Performance and Condition Indicators



The criteria for selecting the EPIs for the EMP included the following considerations:

- Is it of interest and relevance to key stakeholders of Seattle (e.g., employees, citizens, City Council, etc.)?
- Is it relatively easy to measure and collect?
- Is it easy to understand?
- Does it have the potential for cost savings to the City?
- Will it be broadly applicable across City departments?

For most of the indicators, the City will start by measuring trends. This data will be evaluated annually to assess whether the trends are in the expected direction. Specific targets are being established for the following indicators:

- Energy used by the City fleet
- Regulatory violations
- Facility site visits
- Facility compliance assessments

Figure 6 details the Citywide objectives, EPIs, and targets along with departmental responsibilities for data collection.

Figure 6: Environmental Performance Indicators and Targets for the City of Seattle

ENVIRONMENTAL OBJECTIVES	ENVIRONMENTAL PERFORMANCE INDICATORS	TARGET	FINANCIAL BENEFITS	ENVIRONMENTAL & HUMAN HEALTH BENEFITS	RESPONSIBILITY FOR DATA COLLECTION
CONTINUALLY IMPROVE ENVIRONMENTAL PERFORMANCE					
Comply with Regulations	✓Regulatory Violations · # of violations · # of fines · $ of fines · # of releases	Zero violations and fines Zero uncontrolled releases	Reduction in fines	Various	City Attorney's Office collects data, OSE compiles data
	✓Facility Site Visits · % of facilities receiving site visit	Facility site visits: · 50% in 1999 · 50% in 2000			
	✓Compliance Assessments · corrective actions completed	100% corrective actions completed on schedule			
Reduce Pollution at the Source	Chemical Use (to be added in 2000) · # of active MSDSs on file · number of products phased-out	Trend: down for MSDSs and up for products phased-out	Reduction in: · hazardous materials purchase costs · disposal costs · storage costs · risk costs · record keeping costs	Reduction in: · landfill or other disposal · employee/public exposure · accidental releases · non-point source releases Improvement in: · air quality · water quality	Baseline data to be gathered in 1999; all departments will gather data; OSE will compile & analyze
	Hazardous Waste Generated · lbs of waste disposed · $ of waste disposed	Trend: down	Reduction in: · waste disposal and compliance costs · hazardous materials purchased	Reduction in: · land converted to landfills · energy to transport waste	OSE compiles data

ENVIRONMENTAL OBJECTIVES	ENVIRONMENTAL PERFORMANCE INDICATORS	TARGET	FINANCIAL BENEFITS	ENVIRONMENTAL & HUMAN HEALTH BENEFITS	RESPONSIBILITY FOR DATA COLLECTION
Reduce Pollution at the Source	Solid Waste Generated · tons generated	Trend: down	Reduction in: · waste disposal costs	Reduction in: · land converted to landfills · methane gas emissions	SPU/ESD
	Waste Stream Recycled · tons recycled	Trend: increase	Reduction in: · waste disposal costs Increase in: · revenue generated	Reduction in: · consumption of resources	ESD
	Green Waste (to be added in 2000) · lbs or tons green waste commercially recycled or disposed	Trend: down	Reduction in: · disposal costs · purchase of commercial mulches · water use (irrigation)	Reduction in: · energy to transport material to disposal sites · odor at off-site composting facilities	OSE compiles data
Reduce Consumption of Resources	Paper Purchases · lbs or reams	Trend: down			ESD - Purchasing
	Use of Env.-Preferable Products (e.g., recycled oil) · quarts oil used · % oil used that is recycled product	Trend: up (80% recycled is current goal)	Encourages market in recycled goods	Reduction in: · natural resource extraction impacts	ESD - Fleets/Purchasing
	Energy Used in City Facilities · facility energy use · total spent on energy	Trend: down	Reduction in energy costs	· Avoided cost of building new supply (electricity) · Air quality improvements (fossil fuel reductions)	· Depts collect and report on bldg/facility energy use · Limit analysis to representative bldgs/facilities

ENVIRONMENTAL OBJECTIVES	ENVIRONMENTAL PERFORMANCE INDICATORS	TARGET	FINANCIAL BENEFITS	ENVIRONMENTAL & HUMAN HEALTH BENEFITS	RESPONSIBILITY FOR DATA COLLECTION
Reduce Consumption of Resources	✓Energy Used by the City Fleet · fuel use by City fleet vehicles (gasoline, diesel, and CNG)	· Fuel use reduced by 5% by year 2005	Reduction in: · energy costs	Reduction in: · air emissions that contribute to global warming and pollution · use of non-renewable natural resources Improvement in: · air quality	· ESD collects data · OSE compiles and analyzes data
	Water Used in City Facilities · gallons of water used	Trend: down	Reduction in: · water and sewer · costs	· Reduction in waste water to be treated · Increased water in stream · Improved water quality	· Depts collect and report on building/facility water use · OSE compiles and analyzes data · Limit analysis to representative bldgs/facilities

✓ Indicates those areas where numeric Citywide performance targets have been set.

6 ENVIRONMENTAL POLICIES AND PROCEDURES

The ISO 14001 standard specifies the following for environmental policies:

Top management shall define the organization's environmental policy and ensure that it:

- *is appropriate to the nature, scale, and environmental impacts of its activities, products, or services;*
- *includes a commitment to continual improvement and prevention of pollution;*
- *includes a commitment to comply with relevant environmental legislation and regulations, and with other requirements to which the organization subscribes;*
- *provides the framework for setting and reviewing environmental objectives and targets;*
- *is documented, implemented and maintained and communicated to all employees;*
- *is available to the public. (Source: ISO 14001, Section 4.2)*

This section contains the City's policies and procedures on specific environmental aspects.

6.1 COMPLIANCE ASSESSMENT

6.1.1 Purpose

The purpose of this policy is to establish an assessment program to evaluate compliance of City facilities with applicable environmental requirements, to identify risks and liabilities, and to ensure that corrective actions are implemented in a timely fashion.

6.1.2 Organizations Affected

All City departments with facilities that are subject to environmental requirements are affected.

6.1.3 Definitions

Assessment Findings: A written report prepared by the assessment team that documents deficiencies in meeting environmental requirements and identifies risks and liabilities. Assessment findings shall address deficiencies in meeting local, state, and federal regulatory requirements; conditions that represent a significant risk or liability to the City; deficiencies in meeting City environmental policies and standards; and deficiencies in management systems, such as record-keeping, document control, and clarity of roles and responsibilities, etc.

Corrective Action Plan: A document prepared by the facility manager to address findings and remedy deficiencies identified in an environmental compliance assessment. The corrective action plan includes, identification of root causes, actions to be taken to remedy deficiencies, a completion schedule with milestones for key actions, and designation of person(s) responsible for implementing the action plan.

Environmental Compliance Assessment: A formal, systematic, documented, and objective review of facility operations and practices to evaluate compliance with applicable environmental requirements and to identify risks and liabilities. For the purposes of this policy, an interdepartmental assessment team conducts an environmental compliance assessment. The assessment process includes an evaluation of the facility using assessment protocols, review of records and documentation, preparation of written findings, preparation of a corrective action plan by the facility manager, and inspection of the facility following implementation of the corrective action plan.

Environmental Requirements: Local, state, and federal environmental regulations; environmental permits, authorizations, and/or licenses; and City environmental policies and standards that apply to a facility, its operations, and/or its employees.

Facility: A physical plant or site, together with its activities and the employees engaged in those activities, that is subject to environmental requirements.

Follow-up Inspection: Inspection done by one or more members of an assessment team after an environmental compliance assessment to document completion/non-completion of corrective actions.

Assessment Protocols: Written standards for each environmental requirement that provide the basis for a systematic, consistent, and objective evaluation of a facility and its operations against environmental requirements.

Site Visit: An on-site visit to a facility made by (an) employee(s) with expertise in applicable environmental requirements. The purpose of the site visit is to survey the facility and its operations for the purpose of assessing compliance with environmental requirements and identifying risks and liabilities. A site visit is less formal and structured than an environmental compliance assessment.

6.1.4 Policy

It is the policy of the City of Seattle to operate its facilities in compliance with applicable environmental requirements. To ensure facility compliance, departments will conduct site visits and environmental compliance assessments of regulated facilities.

A site visit of each regulated facility will be conducted annually by departmental staff with expertise in applicable environmental requirements. During the first two years, following program implementation, departments will only be required to conduct site visits at half of their facilities each year.

Environmental compliance assessments of more complex City facilities shall be conducted on a regular basis in order to assist department management in ensuring that their facilities are in compliance. Complex facilities generally cover several operations, have many permit requirements, and pose a greater environmental risk. The HMC will determine which facilities shall receive compliance assessments.

An interdepartmental assessment team comprised of employees with relevant training, knowledge, and skills shall conduct compliance assessments. Participation by departments on assessment teams shall generally be proportional to the number and complexity of department facilities subject to assessments.

Facility managers must prepare corrective action plans that identify actions to remedy deficiencies identified in the findings report and an implementation schedule.

6.1.5 Procedures and Responsibilities

The City's Office of Sustainability & Environment (OSE), working with the Hazardous Materials Committee (HMC), is responsible for coordinating and overseeing implementation of this policy.

Department directors are responsible for ensuring that all of their regulated facilities receive a site visit at least once a year. Site visits will only be required at each regulated facility once during first two years following program implementation. Documentation of site visits shall be submitted to the OSE at the end of each year.

The OSE and HMC, each year, will select the complex facilities to receive a compliance assessment. They will also determine the qualifications for assessment team members, select the members of the assessment team for each facility to be

assessed, develop and keep updated standard assessment protocols, and review the effectiveness of the assessment program on a regular basis.

The OSE and HMC shall assist departments in identifying training modules so that each affected department has at least one member with the expertise and knowledge required to serve on assessment teams.

The OSE, in consultation with the HMC and the City Attorney's Office, shall develop an environmental compliance assessment procedure, which addresses the following topics:

- Selection of facilities to be assessed each year;
- Cycle for assessments;
- Scope and development of assessment protocols;
- Communication with facility and departmental management prior to, during, and following an assessment;
- Review of documents prior to the site visit;
- Conduct of the site tour;
- Format and guidelines for preparation and communication of the assessment findings report;
- Format and guidelines for preparation and transmittal of the corrective action plan;
- Format and guidelines for the follow-up inspection; and
- Procedures for document control, record keeping, and reporting.

The OSE shall be responsible for tracking completion of corrective action plans, assisting the assessment team in scheduling follow-up inspections, and reporting program status to the Mayor and City Council on an annual basis.

Assessment teams shall be comprised of at least three persons from two or more City departments. The team leader for an assessment shall be the member from the department that operates the facility to be assessed, unless that department requests that another employee carry out team leader responsibilities.

Department directors are responsible for supporting the interdepartmental environmental compliance assessment program by providing resources for participation by their environmental staff, facility management, and employees. They are also responsible for providing necessary training for employees who serve as assessors, directing the full cooperation and participation by facility managers and staff, and providing resources for implementing corrective action plans.

Department directors are responsible for ensuring that a corrective action plan is prepared by facility management following receipt of assessment findings and that the corrective action plan is implemented in a timely fashion.

The City Attorney's Office shall assist the OSE, the HMC, assessment teams, and departments by providing regulatory interpretation and legal counsel as necessary relative to protocols, assessment findings, and corrective action plans. Law also shall assist with determining relative risk or potential liability, and with confidentiality requirements, associated with assessment findings.

6.1.6 References

Key laws and regulations are as follows, although additional ones might be included as appropriate:

Hazardous Materials and Waste

- State of Washington Dangerous Waste Regulations (WAC 173-303).
- Resource Conservation and Recovery Act as amended by the Hazardous Solid Waste Amendments (42 USC Sections 6901-2992).
- Washington Hazardous Waste Reduction Act (Chapter 70.95 RCW; WAC 173-305).
- Toxic Substance Control Act (15 USC Section 2605; 40 CFR Section 761).
- Hazardous Materials Transportation Act (49 USC Sec. 1801 et seq.; 49 CFR 107, 171-197).

Pesticides

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (USC Sec. 136; 40 CFR Section 152-80).
- Washington Pesticide Act, and Washington Pesticide Application Act (Chapter 15.58.010 et seq., 17.21.010 et seq. 70.104.010 et seq.; WAC 16-228-010).

Storage Tanks

- Washington UST Law (WAC 173-340).
- Fire Code for above ground storage tanks.

Water Quality

- Clean Water Act (33 USC Sec. 1251-1387; 40 CFR 100-140).
- Washington Water Pollution Control Act (Chapter 90.48 RCW, WAC 173-201).
- Washington Safe Drinking Water Act (Section 70.119A RCW; WAC 246-290).

Air Quality

- Washington Clean Air Act (Chapter 70.94 RCW; WAC 173-402-010-020).
- Puget Sound Air Pollution Control Agency Regulations.
- National Emissions Standard for Hazardous Air Pollutants (NESHAP).

Fire Code

- Applicable Fire Code.

6.2 HAZARDOUS WASTE MANAGEMENT

6.2.1 Purpose

The purpose of this policy is to ensure that the City of Seattle manages its hazardous wastes efficiently and in compliance with all laws and regulations, and to promote reduction in the amount of hazardous waste generated by the City to the maximum extent possible.

6.2.2 Organizations Affected

All City departments with facilities that generate hazardous waste are affected, as well as the Seattle Public Utilities' Household Hazardous Waste Program, which collects wastes generated by residents per King County's Local Hazardous Waste Management Program.

6.2.3 Definitions

Facility: All buildings, equipment, structures, and other stationary items located on a single site or on contiguous or adjacent sites.

Generator: Any facility whose act or process produces hazardous waste or whose act first causes a hazardous waste to become subject to regulation.

Hazardous Wastes: Those solid wastes that could be designated by 40 CFR Part 261 or WAC 173-303 or other state law as moderate risk, dangerous, hazardous or extremely hazardous wastes. This includes, for example, wastes that are ignitable, corrosive, or toxic as defined in WAC Chapter 173-303.

Moderate Risk Wastes: Those solid wastes that (a) exhibit any of the properties of hazardous waste but are exempt from regulation under Chapter 70.105 RCW solely because the waste is generated in quantities below the threshold for regulation; and (b) any household wastes that are generated from the disposal of substances identified by the Washington State Department of Ecology as hazardous household substances.[5]

Pollution Prevention Plan: A plan, defined in 70.95C.200 RCW and WAC 173-307, required of certain hazardous waste generators and hazardous substance users to voluntarily reduce hazardous substance use and hazardous waste generation.

6.2.4 Policy

The City shall store, handle, transport, and dispose of hazardous wastes in a safe and environmentally sound manner and shall comply with all applicable laws and regulations pertaining to hazardous waste management.

The City shall ensure that all appropriate precautionary measures are taken to protect employees and the public from exposure to hazardous wastes.

[5] This applies to household hazardous wastes collected by Seattle Public Utilities per the Local Hazardous Waste Management Program in King County.

In managing moderate risk wastes, departments are encouraged to manage the wastes in a manner consistent with fully regulated wastes of the same type whenever practical. Departments shall, in any case, assess the specific risks and liabilities posed by moderate risk wastes and manage the wastes appropriately.

The City shall strive to follow State policy that sets forth the following priorities in the management of hazardous waste, which should be followed in order of descending priority as applicable: (1) waste reduction; (2) waste recycling; (3) physical, chemical, and biological treatment; (4) incineration; (5) solidification/stabilization treatment; (6) landfill.[6]

The City shall strive to reduce its hazardous waste stream to the maximum extent possible.

The City shall strive to select methods for minimizing hazardous waste generation that will not shift human health and environmental risks from one part of a process, environmental medium, or product to another.[7]

6.2.5 Procedures and Responsibilities

In each City department that generates hazardous waste, the department director shall be responsible for:

- Ensuring departmental compliance with all applicable hazardous waste laws and regulations and this City policy;
- Designating one person as department coordinator for hazardous waste management;
- Identifying all facilities under the control of the department that generate hazardous waste;
- Developing and maintaining departmental procedures to manage hazardous waste in a safe and environmentally sound manner;
- Developing departmental plans or procedures to reduce its hazardous waste stream to the maximum extent possible and monitoring and documenting progress in hazardous waste minimization. Procedures may address, for example, product substitution (the use of less hazardous chemicals), minimizing the quantities of materials used, changing work practices and processes, reusing materials, segregating wastes, and recycling (Facilities with pollution prevention plans prepared in accordance with WAC Chapter 173-307 shall be deemed to have satisfied this requirement.);
- Providing information and training to employees on proper waste storage, handling, transport and disposal methods, and submitting all required notifications and reports to regulatory agencies on hazardous waste activities; for example, Annual Dangerous Waste Reports, Requests for EPA/State Identification Numbers, Pollution Prevention Plans, and Pollution Prevention Annual Progress Reports; and
- Maintaining legally mandated records of hazardous waste activities.

The Executive Services Department (ESD) shall be responsible for:

[6] See RCW 70.105.150 for statement of State policy and definitions of management options listed.

[7] Per WAC 173-307-030 (2) (f), this is a standard requirement for facilities required to prepare a Pollution Prevention Plan.

- Facilitating the purchase of materials and services so that high priority is given to minimizing the City's hazardous waste stream;
- Facilitating contract development for waste analysis and disposal to require that all successful bidders are fully compliant with all applicable regulations; and
- Facilitating disposition through the City's surplus process of appropriate surplus hazardous materials, which would otherwise require disposal as hazardous waste.

The Office of Sustainability & Environment (OSE) shall be responsible for coordinating Citywide planning, assessment, and guidance activities to assist departments in managing hazardous waste.

6.2.6 References

- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901 et seq., and regulations at 40 CFR).
- Hazardous Materials Transportation Act (HMTA) (49 U.S.C. and regulations at 49 CFR.
- State of Washington Hazardous Waste Management Act (Chapter 70.105 RCW).
- State of Washington Dangerous Waste Regulations (WAC 173-303).
- State of Washington Hazardous Waste Reduction Act of 1990 (Chapter 70.95C RCW).
- State of Washington Pollution Prevention Plans Regulations (WAC 173-307).
- Local Hazardous Waste Management Program in King County, 1990.
- Seattle City Council Resolution 29268 on Reducing the Use of Hazardous Materials in the City of Seattle, December 1995.
- Uniform Fire Code.
- Seattle Fire Code, SMC 22.600.
- Administrative Rule Number 97-1 of the Executive Services Department, Regarding Disposition of Surplus Materials, Supplies and Equipment Other Than Real Property.

6.3 CHEMICAL USE

6.3.1 Purpose

The purpose of this policy is to establish a chemical use program to ensure consistent evaluation of hazardous materials used by City employees, to phase out products that pose human health or environmental risks, and to promote the use of non-hazardous alternatives by the City that are protective of human health and the environment.

In short, the purpose is to:

- Know what chemicals are being used;
- Make conscious decisions about the chemicals selected for use;
- Use chemicals wisely; and
- Make full use of chemicals bought.

6.3.2 Organizations Affected

All City departments that purchase and use hazardous materials are affected.[8]

6.3.3 Definitions

Hazardous Material: A chemical or mixture that can pose a physical hazard, health hazard, or environmental hazard and that is regulated under the law to control its harmful effects. This definition is not intended to be rigid or legalistic because all materials regulated in this manner merit special attention and consideration by the City under this policy.

Hazardous Waste: Those solid wastes that are designated by 40 CFR Part 261 or WAC 173-303 as moderate risk, dangerous, hazardous, or extremely hazardous waste.

6.3.4 Policy

Hazardous materials shall be used, stored, transported, and disposed of in compliance with all applicable laws and regulations.

In designing, constructing, and maintaining City facilities, and in designing and conducting the City's operations, departments shall give priority to minimizing the need for hazardous materials. Consideration will be given to options such as process changes, product changes, improved operations and maintenance, modernized processes and/or equipment, closed-loop recycling, and material substitutions.

When a hazardous material is needed, the amount purchased and used shall be the smallest quantity practical. Recognizing that the purchase price of a product does not reflect its true cost to the City, use of large quantity discounts, bulk container purchases or minimum order requirements that exceed departmental needs should be discouraged when procuring hazardous materials.

[8] This policy does not apply to abandoned hazardous materials found on City property, household hazardous waste collected by Seattle Public Utilities, criminal evidence gathered by Seattle Police Department, and other materials received by the City but not within our control.

City departments shall participate in annual interdepartmental efforts to inventory all hazardous materials used per year and to develop and maintain a Citywide chemical management information system on hazardous materials usage.

Upon completion of each annual citywide inventory of hazardous materials usage, the following general criteria shall be used to designate certain hazardous materials for phase-out from City inventories and limitation of new product purchases:

- Do they pose as a human health risk?;
- Do they pose as an environmental risk?;
- Are they legally disposable?;
- Does their use create Extremely Hazardous Waste, which is hazardous waste that is classified as "Extremely Hazardous Waste" under WAC 173-303-100 and has a quantity exclusion limit of 2.2 pound per month?; and
- Is the use, emission of, or discharge to air or water highly regulated?

Any product containing hazardous materials that is not listed on a department's inventory shall not be purchased or used by that department without prior review to determine whether the product meets the City's health and environmental criteria.

When selecting replacements to hazardous materials targeted for phase-out, and in approving new products for use, departments shall place highest priority on protecting worker health and safety, protecting public health, and protecting the environment. The next level of priority to be considered includes product effectiveness and cost effectiveness.

Where hazardous materials are used in equipment serving functions vital to the City's operations, and the City has made significant investment in the equipment in which the chemicals are used or there are no satisfactory replacements, it is recognized that phase-out of those hazardous materials may not be immediately practical. Examples include fire suppression systems charged with halons, refrigeration or air conditioning systems using chloroflourocarbons, and electrical equipment filled with PCB-containing transformer oil or sulfur hexaflouride gas. In those cases, departments shall develop and implement best management practices to minimize the quantity of hazardous materials required, protect worker health and safety, and minimize release of hazardous materials to the environment. Such best management practices may include, for example, preventive maintenance procedures, use of leak detection methods or equipment, and use of recapture or closed-loop recycling systems.

When appropriate, excess hazardous materials should be returned to the supplier when that is an option, or offered for use by other City departments or elsewhere per the City Recommended Guidelines for Surplus of Hazardous Materials and ESD Administrative Rule 97-1 Regarding Disposition of Surplus Materials, Supplies and Equipment Other Than Real Property.

6.3.5 Procedures and Responsibilities

6.3.5.1 Developing and Conducting Annual Hazardous Materials Inventory

The Office of Sustainability & Environment (OSE) shall coordinate development of a Citywide format for an annual comprehensive inventory of hazardous materials usage.

Department directors shall ensure that departments participate in Citywide planning for the inventory, conduct the inventory, and report the information in the specified format.

Upon completion of the initial inventory, each product identified on the inventory list shall be approved for use unless it has been identified for phase-out and a replacement option has been approved per Section 6.3.5.2.

6.3.5.2 Phasing-out Targeted Chemicals

Each year, the OSE shall compile data from the annual Citywide inventory and work with departments and, where applicable, user groups,[9] to refine chemical phase-out criteria, develop a Citywide prioritized list of chemicals targeted for phase-out, and establish a work plan including tasks and schedules for phase-out of chemicals.

Department directors shall ensure that departments participate in Citywide efforts to establish the annual phase-out list and annual work plan. Directors will also incorporate elements of the Citywide work plan into departmental work plans.

In addition to the chemical phase-out criteria, the OSE shall develop guidelines for evaluating replacement options for the products targeted for phase-out.

The OSE shall facilitate interdepartmental user groups in evaluating their hazardous materials usage. The OSE shall assist user groups and, where applicable, individual departments in researching alternatives to products targeted for phase-out.

Department directors shall ensure that departments participate in interdepartmental efforts as needed to phase-out targeted hazardous materials. Directors shall also evaluate proposed alternatives per guidelines developed by the Office of Environmental Management.

6.3.5.3 Reviewing Requests for New Products[10]

Any product containing hazardous materials that is not listed on a department's inventory shall not be purchased or used by that department without prior review to determine whether the product meets the City's health and environmental criteria.

Department directors shall ensure that departments have internal procedures to review requests for new products using guidelines established by the Office of Environmental Management and to prevent unauthorized use of new hazardous materials that have not been reviewed, or have been reviewed and rejected.

Department directors shall ensure that new products approved for use are added to the department's inventory list.

New products, approved for use within each department review, shall be subject to review for consistency with City criteria by the OSE upon completion of the next annual inventory. The Director of the OSE, in consultation with the City Safety Office and/or the applicable user group, shall make the final determination on product acceptability before such products are added to the permanent inventory of approved products.

[9] We anticipate that, in many cases, hazardous materials targeted for phase-out will be associated with user groups that are common to multiple City Departments. Potential user groups may include, for example, landscapers, painters, and custodians.

[10] This refers to requests for new products that are initiated by employees, independent of the process to identify replacement products for chemicals scheduled for phase-out.

6.3.5.4 Reviewing and Revising Procurement Procedures

The Executive Services Department (ESD) shall review procurement practices to ensure that they are consistent with this policy, including an assessment of:

1. Standards for size and quantity of materials to be purchased under City contracts, including minimum order requirements, unit sizes, and quantity discounts;
2. Standards for type of materials available under City contracts to restrict availability of chemicals targeted for phase-out;
3. Standards requiring vendors to accept return of unused products;
4. Existing Blanket Contracts which are high priority for revision or replacement based on factors (1) or (2) above; and
5. Current utilization of direct vouchers for hazardous materials purchases.

6.3.5.5 Developing, Installing, and Maintaining the Chemical Management Information System

The OSE shall identify user requirements for a centralized chemical management information system that will be used to implement both the City's Hazard Communication Policy and Chemical Use Policy.

The OSE shall develop, install and maintain the chemical management information system and develop interdepartmental agreements on use and maintenance of the system.

Department directors shall ensure that departments comply with interdepartmental agreements on use of the chemical management information system.

6.3.5.6 Incorporating Hazardous Materials Minimization into Operations

The OSE shall assist departments, as needed, in identifying alternatives and developing and implementing best management practices to minimize hazardous materials use.

Department directors shall ensure that departments incorporate measures into their operations to reduce hazardous materials use, document those measures, and develop applicable written procedures on those measures.[11]

6.3.5.7 Involving and Training Employees

The OSE shall coordinate development of training materials to assist departments in implementing this policy.

Department directors shall ensure that departments train employees on departmental policies and procedures relevant to this policy. Department directors shall also support employee involvement in identifying and implementing strategies to minimize the use of hazardous materials and in evaluating replacements to chemicals targeted for phase-out.

6.3.5.8 Tracking Progress and Evaluating the Program

The OSE shall compile data on Citywide policy implementation, and make recommendations for future direction of the program.

[11] This is based on requirements of the Washington State Pollution Prevention Plans Regulations, WAC 173-307. Departments with pollution prevention plans prepared in accordance with that regulation shall be deemed to have satisfied this requirement.

Department directors shall report annually on progress in carrying out agreed-upon work plans for implementing this policy.

6.3.6 References

- City of Seattle Council Resolution 29268, December 18, 1995.
- Hazardous Materials Coordinating Committee (HMCC) Report on Council Resolution 29268, June 25, 1996.
- Hazardous Materials Coordinating Committee (HMCC) Recommended Guidelines for Surplussing Hazardous Materials, December 1997.
- State of Washington Hazardous Waste Reduction Act of 1990.
- State of Washington Pollution Prevention Plans Regulations, WAC 173-307.

6.4 HAZARD COMMUNICATION

6.4.1 Purpose

The purpose of this policy is to ensure that all City departments comply with laws and regulations that establish requirements for information and training on hazardous chemicals used in the workplace.

6.4.2 Organizations Affected

All City departments are affected.

6.4.3 Definitions

Consumer Products: Any consumer product as defined in the Consumer Product Safety Act (15U.S.C 2051 et seq.) for which the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure that is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended (WAC 296-62-05403).

Hazard Communication: The title of both federal and Washington State regulations requiring manufacturers to evaluate and provide information on the hazards of chemicals that they produce. The regulations also require employers to take responsibility for communicating information about chemical hazards to their employees.

Hazardous Chemical: Any chemical that is a physical hazard or a health hazard as defined in the Washington Hazard Communication Standard (WAC 296-62-054 and following). The use of the term in this policy is not intended to include those hazardous chemicals used as consumer products (see definition of consumer product).

Material Safety Data Sheet (MSDS): Written or printed material describing a hazardous chemical or a hazardous substance and containing information relative to identity, physical and chemical characteristics, known health effects, exposure limits, precautionary measures, emergency and first aid procedures, and the identity of the organization that prepared the MSDS, among other information, and that is prepared in accordance with WAC 296-62-05413.

Workplace: An establishment, job-site, or project at one geographic location containing one or more work areas or processes. A workplace may include remote or temporary work locations or vehicles.

Worker Right-to-Know (WRTK): The common term used to express workers' right to know the identity and potential hazards of chemicals to which they are or may be exposed in the work environment. The central regulation governing WRTK is the Washington State Hazard Communication Standard.

6.4.4 Policy

City departments shall comply with all applicable laws and regulations relating to hazard communication.

Material Safety Data Sheets (MSDS) shall be maintained in a Citywide Chemical Management Information System and shall be made readily available to all employees for all hazardous chemicals present in their workplace (WAC 296-62-05413).

No hazardous chemical shall be used in the workplace unless there is an MSDS readily available (No MSDS = No Use), and all employees who may be exposed under normal conditions of use or in a foreseeable emergency are trained in the methods to detect the presence or release of the chemical, the chemical's physical and health hazards, proper protective measures, and proper use of the chemical (WAC 296-62-05415).

Meeting the requirement for maintaining a list(s) of hazardous chemicals known to be present in the workplace on a Citywide level, as is allowed under the Hazard Communication Standard (WAC 296-62-05409), is impractical for the City due to the diversity of work processes and chemicals present. Therefore, for the purpose of compliance with the requirements, departments shall maintain lists of the hazardous chemicals known to be present on a division, organization unit, or workplace basis, as suitable to the functions of the departments.

Recognizing that consumer products may not be covered by the Hazard Communication Standard, the City nonetheless encourages departments to determine whether individual consumer products should be dealt with as regulated hazardous chemicals.

6.4.5 Procedures and Responsibilities

Each department shall develop and maintain a written hazard communication program that meets the requirements of the Washington State Hazard Communication Standard (WAC 296-62-054 and following). The program shall include requirements for maintaining lists of hazardous chemicals known to be present in workplaces, labels and other forms of warning, procedures for maintaining and retrieving Material Safety Data Sheets, and employee information and training procedures, among other required information. In addition to any requirements under the Hazard Communication Standard, the written plan shall specify the individuals with responsibility for all functions identified in this policy.

Training provided under the departments' written hazard communication program shall include at a minimum: how employees can detect the presence or release of hazardous chemicals, physical and health hazards of hazardous chemicals in the workplace, how employees can protect themselves through work practices and with personal protective equipment, emergency procedures, and the details of the hazard communication program. Training shall also include an explanation of the labeling system and MSDSs and instructions on how to obtain and use hazard information.

Department directors shall maintain hazardous chemical lists on a division, organization unit, or workplace basis, as suitable to the functions of the department.

For a period of 30 years, each department shall maintain records of all training conducted under its written hazard communication program. The City encourages using the City personnel training tracking system, HRIS, to maintain these records.

The Office of Sustainability & Environment (OSE) shall develop, install, and maintain a chemical management information system to manage MSDSs and chemical product lists on a citywide basis. See Section 6.3.5.5.

Responsibilities within departments shall be as follows:

Department directors shall be responsible for compliance with the Hazard Communication Standard and designate responsibility for the following functions:

- Develop and implement the written hazard communication program;
- Periodically review the hazard communication program, including the written plan, to ensure its continued compliance with the Hazard Communication Standard;
- Ensure that lists of hazardous chemicals are maintained on a division, organization unit, or workplace basis;
- Develop procedures for and conduct initial training of new employees. Also develop procedures for additional training when new chemicals are brought into a workplace and when job assignments change;
- Maintain training records for all training conducted under the hazard communication program; and
- Act as liaison with the OSE in all matters related to this policy.

Supervisors shall ensure that all employees receive training upon initial assignment and follow up training for new chemicals or work practices. Supervisors shall also ensure that the associated documentation is made in accordance with the department's written hazard communication program. They will also be familiar with the MSDS for each hazardous chemical used in an area under their oversight and be responsible for enforcing the policy of "No MSDS = No Use."

Employees shall be responsible for:

- Participating in hazard communication training;
- Not using any hazardous chemical for which there is no MSDS readily available;
- Understanding the hazards of all chemicals in the workplace; and
- Taking appropriate precautions in using hazardous chemicals.

6.4.6 References

- Hazard Communication Standard (WAC 296-62-054 and following).
- *Understanding 'Right to Know'*, State of Washington Department of Labor and Industries, Document P413-012-000 (July 1996).

6.5 ABANDONED WASTE

6.5.1 Purpose

The purpose of this policy is to ensure that abandoned hazardous waste on City property, or waste suspected to be hazardous, is managed in compliance with applicable regulations.

6.5.2 Organizations Affected

All departments that own or maintain property to which there is public access.

6.5.3 Definitions

Abandoned Hazardous Waste: a chemical substance or mixture that has been left untended on City property and poses a hazard to human health or the environment, or a risk of fire or explosion. The material may be in containers such as drums, bottles, cans, etc.

Qualified City Hazardous Materials Response Staff: City employees who have been specifically trained to initially characterize wastes and to contain, transport, and document hazardous materials. Training includes at least 24 hours of hazardous response training and training in the preparation of manifests, characterization of hazardous materials, and on-site containerization of hazardous materials.

Emergency Response Contractor: A contractor who has the resources for responding to incidents involving hazardous materials on a 24-hour basis.

Large Quantity: Equal to or greater than 220 pounds.

Small Quantity: Less than 220 pounds.

Temporary Storage Facilities: Departmental hazardous waste storage facilities that can be used on a temporary basis until waste can be transported for recycling or disposal.

Incident Report: Form developed by departments for recording information about abandoned hazardous waste events.

Personal Protective Equipment (PPE): Clothing and other gear that the qualified response staff needs for personal protection when responding to a site. Personal protective equipment can include gloves, Tyvek® suits, and respirators.

6.5.4 Policy

City departments shall comply with all applicable laws and regulations relating to the handling and disposal of hazardous waste (see Hazardous Waste Management policy, Section 6.2). Staff who may encounter abandoned hazardous waste, or waste suspected to be hazardous, shall at least be provided awareness training in recognizing such material. Only trained response staff, as defined in this policy, shall handle abandoned hazardous waste, or waste suspected to be hazardous. Departments shall take all reasonable measures to investigate incidents of abandoned hazardous waste.

6.5.5 Procedures and Responsibilities

Department directors are responsible for developing departmental procedures for identifying, collecting, transporting, storing, disposing, record keeping, and reporting incidences of abandoned hazardous waste, or waste suspected to be hazardous, consistent with applicable laws and regulations and this policy. At a minimum, departmental procedures shall include the following:

- Identify qualified response staff designated to respond to illegal dumping incidents. Departments may use their own trained staff, arrange with another department to provide this staff, or utilize an emergency response contractor for this service;
- Identify temporary storage locations, if any, and the Moderate Risk Waste Facility(s) the Department will use for storage, recycling, or disposal of abandoned hazardous waste;
- Training requirements for City employees designated as qualified response staff and for staff likely to encounter abandoned hazardous waste, or waste suspected to be hazardous. Employees likely to encounter such waste include staff who work in open areas with public access, e.g. police officers, surveyors, grounds maintenance and utility repair crews, etc.; and
- Provisions for after-hours response.

Departments are responsible for providing an incident report form for all reports of abandoned hazardous materials, or materials suspected to be hazardous. Reports shall include at a minimum the following information:

- name of person who identified site;
- name of person responding; the location, quantity, and nature of materials;
- condition of containers; media impacted and nature of any release to the environment; and
- any information regarding the source of the material.

Departments shall also develop procedures for contacting the Department of Ecology (Ecology) to obtain an emergency Environmental Protection Agency (EPA)/state identification number, which is required to transport and dispose of the material if the abandoned hazardous waste is a large quantity (220 pounds or greater). Upon request, Ecology staff may respond to the site and characterize and dispose of the waste. If departments choose to rely on Ecology to respond to such incidents, they shall develop response procedures in the event Ecology cannot respond to the site in a timely manner.

If the material is hazardous and represents an immediate threat to health and safety or involves chemicals that could be potentially explosive (including ether, dioxane, and picric acid), call 911 prior to implementation of any other procedures. The City's fire and police departments, in consultation with Ecology, will determine how to handle the material.

If the material is suspected of being drug lab precursor chemicals contact the Seattle Police Department's Clandestine Drug Lab Team. Seattle Police Department (SPD) is the incident coordinator for these incidents and will notify the State Patrol and other appropriate resources.

Abandoned hazardous waste will be characterized using an existing City profile, if available, annotated to denote that it is abandoned waste. Copies of all incident report forms shall be sent to the Office of Sustainability & Environment (OSE). The

OSE shall track the number, nature, and quantities of abandoned hazardous waste and efforts to investigate these incidents.

6.5.6 References

- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. sec. 1801 et seq., as amended, and regulations thereunder).
- Washington Hazardous Waste Management Act (Chapter 70.105D RCW, as amended, and regulations thereunder, including Washington Dangerous Waste Regulations, WAC 173-303, as amended).
- Washington Industrial Safety and Health Act (Chapter 49.17 RCW, as amended, and regulations thereunder, including: Hazard Communication Standard, WAC 296-62-054 et seq., as amended).
- Hazardous Waste Operations and Emergency Response (WAC 296-62-300 et seq., as amended).
- Chapter 10.84, Code of the King County Board of Health, King County Solid Waste Regulations.

6.6 PROPERTY TRANSACTIONS

An Environmental Due Diligence policy was established on December 20, 1995. This policy is presented in full in Appendix D and is summarized here.

6.6.1 Purpose

The purpose of this policy is to integrate environmental due diligence into real property transactions (buying, selling, or other transactions) carried out by the City in order to meet the City's interests in legal/regulatory compliance, protection of the natural environment, risk and liability reduction, and establishment of appropriate land uses.

6.6.2 Organizations Affected

All departments that participate in property transactions.

6.6.3 Definitions

Environmental Due Diligence: A component of prudent due diligence for any real property transaction that is intended to gather reliable information about the environmental condition of real property prior to a transaction.

Phase I Environmental Site Assessment (ESA): A typical Phase I ESA consists of a regulatory records review of the site and adjoining properties, a site reconnaissance, and site historical review, possibly including interviews with past owners or employees. A Phase I ESA is broader and more detailed than a transaction screening.

Phase II ESA: Phase II ESA's (media sampling and analysis) are conducted when the results of a transaction screening or Phase I review reveal the existence of contamination, often signified by discolored or oily soils or surface water. A Phase II ESA is performed to verify Phase I findings, and, if possible, determine the nature and extent of the contamination.

Transaction Screening: A process used initially to decide if a Phase I site assessment is necessary. This process may be used to screen-out sites that have an extremely low potential for environmental problems and therefore do not warrant a Phase I site assessment.

6.6.4 Policy (See Appendix D for full policy)

City departments shall conduct real property transactions in a manner that minimizes the City's environmental liability while allowing the departmental mission to be performed. No real property transaction shall be executed until environmental due diligence has been performed. Department directors are responsible for undertaking necessary and appropriate efforts to identify and minimize legal and environmental liabilities related to real property transactions. At a minimum, department directors shall (1) establish the baseline environmental condition of the property and (2) structure the transaction based on the baseline environmental condition and applicable law. Department directors shall involve the City Attorney's Office when

contamination is found. Environmental due diligence should be performed at the earliest opportunity in order to save staff time and departmental resources.

In any real property transaction, the department proposing the transaction shall ensure that environmental due diligence has been performed in a manner that protects the City's interests. This shall be demonstrated in departmental decision documents addressing individual transactions, before oversight groups (such as the Real Estate Oversight Committee), and in Ordinance language as appropriate.

City departments shall provide periodic training to property management, environmental and other responsible staff regarding the environmental issues associated with real property transactions. This training should include knowledge of current commercial/industry standards for environmental due diligence. The type and frequency of such training is left to the discretion of each department director.

City departments shall include funds for due diligence, including environmental due diligence, as part of their budget for property purchases.

Department directors are responsible for developing written policies and procedures that specify how their department will comply with this policy. The departmental written policies shall specify who is responsible for due diligence and for training appropriate staff.

6.6.5 Procedures and Responsibilities

Procedural guidelines for conducting environmental due diligence are described in the full policy included in Appendix D. These procedures are designed to help decide whether to acquire any interest in the property (fee simple, lease, license, easement, or security interests), as well as to assess environmental and financial liabilities when selling, or continuing to use, a City-owned property. These procedures address transaction screening, environmental site assessments, use of consultants, structuring of the property transaction, and consultation with the Environmental Protection Section of the City Attorney's Office.

Environmental due diligence shall include, as a minimum, a Transaction Screening performed by City staff or qualified consultants. If necessary, a Phase I and II ESA may be completed. If a Transaction Screening, Phase I, or Phase II ESA identifies significant environmental issues, then the department should contact the Environmental Protection Section of the City Attorney's Office to discuss relevant legal concerns including an environmental due diligence strategy, risk allocation, contract language, and the applicability of environmental reporting requirements or other regulations.

6.6.6 References

- The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), codified at 42 U.S.C. §§ 9601-9675.
- Washington Model Toxics Control Act (MTCA), (Chapter 70.105D RCW).

6.7 SITE REMEDIATION (TO BE ADDED)

6.8 SEPA POLICY

6.8.1 Purpose

To ensure that City-sponsored capital projects are conducted in compliance with the State Environmental Policy Act (SEPA) and the City SEPA Ordinance (SMC Chapter 25.05).

6.8.2 Organizations Affected

All departments that develop or sponsor construction projects or take other actions regulated under SEPA.

6.8.3 Definitions

SEPA Coordinator: City staff responsible for making threshold determinations and signing SEPA documents for departmental actions subject to the State Environmental Policy Act.

6.8.4 Policy

Departments shall comply with all procedural and substantive requirements of the SEPA and the City SEPA Ordinance (SMC Chapter 25.05). SEPA environmental review shall be implemented as an objective analysis of the environmental impacts of project alternatives. Only designated SEPA coordinators shall make threshold determinations. SEPA coordinators should not make threshold determinations on projects for which they are the project manager in order to ensure objectivity. Departments are encouraged to consult with the City Attorney's Office and the Department of Construction and Land Use (DCLU) for assistance in meeting their obligations under SEPA.

6.8.5 Procedures and Responsibilities

Departments shall incorporate SEPA review into project planning at the earliest phase to ensure appropriate consideration of environmental information before committing to a particular course of action. Department directors shall designate a SEPA coordinator or make arrangements with another City department to provide this service. Department directors shall take the steps necessary to ensure that mitigation or other requirements established during the SEPA process are implemented.

SEPA Coordinators shall be responsible for:

- Ensuring departmental compliance with SEPA procedural and substantive requirements;
- Assisting project staff in identifying environmental issues associated with a project during conceptual and design phases;
- Reviewing the environmental checklist prepared for the project;
- Issuing a SEPA threshold determination based on that checklist and other relevant materials;
- Providing information to DCLU for public notice requirements;

- Defending the threshold determination during any administrative appeal;
- Overseeing the preparation of environmental impact statements; and
- Coordinating with representatives of DCLU and the City Attorney's Office to share information and address citywide issues associated with SEPA compliance.

The DLCU is responsible for:

- Publishing legally required SEPA public notices and for maintaining the SEPA register and SEPA Public Information Center;
- Maintaining a current list of the departmental SEPA coordinators;
- Advising department directors of appropriate qualifications for SEPA coordinators;
- Developing an ongoing training program, in cooperation with the SEPA Coordinators and the City Attorney's Office;
- Keeping SEPA coordinators informed of changes in state law, city ordinances, or director's rules affecting SEPA requirements; and
- Providing technical assistance to departments on SEPA issues.

The City Attorney's Office is responsible for keeping DCLU and the SEPA coordinators informed of legal decisions relevant to SEPA requirements.

6.8.6 References

- State Environmental Policy Act (WAC 197-11-010 and following).
- Seattle SEPA Ordinance (Chapter 25.05 SMC).

6.9 SUSTAINABLE BUILDING

6.9.1 Purpose

The purpose of a Citywide policy on sustainable building is to demonstrate the City's commitment to environmental, economic, and social stewardship, to yield cost savings to the City taxpayers through reduced operating costs, to provide healthy work environments for staff and visitors, and to contribute to the City's goals of protecting, conserving, and enhancing the region's environmental resources. Additionally, the City helps to set a community standard of sustainable building.

6.9.2 Organizations Affected

All City departments and offices and their contractors responsible for financing, planning, designing, developing, constructing and managing City-owned facilities and buildings.

6.9.3 Definitions

Sustainable Building Sustainable building integrates building materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction and operation of the built environment. Sustainable building merges sound, environmentally responsible practices into one discipline that looks at the environmental, economic and social effects of a building or built project as a whole. Sustainable design encompasses the following broad topics: efficient management of energy and water resources, management of material resources and waste, protection of environmental quality, protection of health and indoor environmental quality, reinforcement of natural systems, and integrating the design approach.

Life Cycle Cost Analysis An inclusive approach to costing a program, facility, or group of facilities that encompasses planning, design, construction, operation and maintenance over the useful life of the facilities and finally any decommissioning or disassembly costs. Life Cycle Cost Analysis looks at the net present value of design options as investments. The goal is to achieve the highest, most cost-effective environmental performance possible over the life of the project.

LEED Rating System LEED stands for Leadership in Energy and Environmental Design, and is a voluntary, consensus-based, market-driven green building rating system. It is based on existing, proven technology and evaluates environmental performance from a "whole building" perspective. LEED is a self-certifying system designed for rating new and existing commercial, institutional, and multi-family residential buildings. It contains prerequisites and credits in five categories: Sustainable Site Planning, Improving Energy Efficiency, Conserving Materials and Resources, Embracing Indoor Environmental Quality, and Safeguarding Water. There are four rating levels: Bronze, Silver, Gold, and Platinum.

6.9.4 Policy

It shall be the policy of the City of Seattle to finance, plan, design, construct, manage, renovate, maintain, and decommission its facilities and buildings to be sustainable. This applies to new construction and major remodels in which the total project square footage meets the criteria given. The US Green Building Council's LEED (Leadership in Energy and Environmental Design) rating system and accompanying Reference Guide shall be used as a design and measurement tool to determine what constitutes sustainable building by national standards. All facilities and buildings over 5,000 gross square feet of occupied space shall meet a minimum LEED Silver rating.

Design and project management teams are encouraged to meet higher LEED rating levels. A Mayor's Award for achieving a higher rating will be awarded. *(See also Energy and Water Conservation Policy and Landscape and Grounds Management Policy.)*

6.9.5 Procedures and Responsibilities

The Directors of all City Departments whose responsibilities include planning, designing, constructing or renovating City-owned facilities shall be responsible for ensuring that facilities and buildings comply with 6.9.4.

The City's Office of Sustainability & Environment (OSE) shall be responsible for coordinating any educational, technical and financial resources available to City departments that support and promote sustainable design and construction of City facilities. The City's OSE shall be responsible for annually evaluating and reporting to the Oversight Panel how well applicable City construction projects meet the goal of sustainability.

The Office of Environmental Management shall establish the minimum number of credits required in each of the LEED categories so that projects shall demonstrate performance in all categories.

The City's interdepartmental Green Building Team, under the OSE, shall be responsible for reviewing and updating the City portion of the LEED reference manual annually, for helping provide technical expertise on specific sustainable building issues on a case by case basis, and coordinating LEED training programs.

6.9.6 Budgeting and Financing

All capital construction which falls under this policy will be expected to budget to meet at minimum the LEED Silver rating. Budget planning and life cycle cost analysis to achieve a higher rating of gold or platinum is encouraged.

6.9.7 Training

City capital project managers currently managing or likely to manage projects which fit the criteria in 6.9.4 will be responsible to attend introductory LEED training and

annual follow-up training. LEED training will be coordinated through the Office of Environmental Management and/or other sponsoring departments.

6.9.8 References

City of Seattle Sustainable Building Action Plan

Seattle's *Solid Waste Plan: On the Path to Sustainability*

USGBC *LEED Reference Manual*

Seattle Energy Code

6.10 PETROLEUM STORAGE TANKS

6.10.1 Purpose

The purpose of this policy is to ensure the operation and management of petroleum aboveground storage tanks (ASTs) and underground storage tanks (USTs) in an environmentally sound manner and to ensure City compliance with federal, state, and local regulations.

6.10.2 Organizations Affected

All departments that own or operate petroleum storage tanks.

6.10.3 Policy

All departments that own regulated storage tanks containing petroleum products shall operate these tanks in compliance with applicable federal, state, and local regulations. These regulations include Spill Prevention, Control, and Countermeasure (SPCC) requirements for ASTs and the following requirements for USTs:

- Permit and performance requirements for new and existing systems
- Spill and overfill control requirements
- Release detection requirements for tanks and piping
- Operation and maintenance requirements for corrosion protection systems
- Repair of systems
- Spill response and reporting
- Record keeping.

6.10.4 Procedures and Responsibilities

Department directors, whose department's own regulated storage tanks, shall be responsible for developing a management plan that shall identify the roles and responsibilities of department personnel for ensuring compliance with regulatory requirements. The management plan shall include an inventory of all storage tank system equipment, procedures for complying with operational requirements, and record keeping procedures. The department director shall provide the management plan, and any updates of the inventory, to the Executive Services Department (ESD).

Department directors shall be responsible for ensuring full compliance with all regulatory requirements for every regulated petroleum storage tank owned by that department. Delegation of operation, or of any compliance procedures, to a party outside of the department owning the tank, must be formalized in a written agreement detailing the delegated responsibilities and the associated internal liability.

The ESD shall maintain current copies of the management plans and any updates to the storage tank inventory for all departments.

6.10.5 References

Regulations

- Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 6901, et seq.).
- Washington State Underground Storage Tank Regulations (WAC 173-360).
- Clean Water Act (40 CFR 110 and 112).
- Washington Clean Air Act (Chapter 70.94 RCW; WAC 173-402-010) and Puget Sound Air Pollution Control Agency Regulations.
- Uniform Fire Code.

Other Sources

- *Musts for USTs*, U.S. Environmental Protection Agency, September 1988 (Document EPA/530/UST-88/008).
- *Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology, July 1991* (Document 91-30).
- *Upgrade Your Underground Storage Tank Don't Wait Until 1998*, Washington State Department of Ecology, May 1994 (Document 94-68).

6.11 ENERGY AND WATER CONSERVATION

6.11.1 Purpose

The purpose of a Citywide policy on energy and water conservation is to demonstrate the City's commitment to environmental stewardship, to yield cost savings for City taxpayers through reduced utility bills, and to contribute to the electric and water utilities' demand management goals. Additionally, the City, as a leader, contributes to a community standard of water and energy use efficiency.

6.11.2 Organizations Affected

All City departments and offices responsible for managing facilities, buildings, and equipment are affected.

6.11.3 Definitions

Life Cycle Cost Analysis: An inclusive approach to costing a program, facility, or group of facilities that encompasses, planning, design, construction, operation and maintenance over the useful life of the facilities and any decommissioning costs or credits.

6.11.4 Policy

It shall be the policy of the City of Seattle to design, construct, manage, and maintain its equipment, facilities, and landscapes to be energy and water efficient and to avoid wasting water and energy. (See also *Landscape and Grounds Management Policy* and *Fleet Management Policy.)*

6.11.5 Procedures and Responsibilities

The Directors of the Executive Services, Parks, City Light, Seattle Public Utilities, Libraries and Seattle Transportation Departments shall be responsible for conducting energy and water conservation audits on their buildings and facilities that are larger than 10,000 square feet or are intensive energy or water users. The audits shall be conducted not less than every five years to identify, analyze, prioritize, and budget for energy and water conservation opportunities.

The City's Office of Sustainability & Environment (OSE) shall be responsible for:

- Developing protocols for energy and water conservation audits for use by departments;
- Collecting, analyzing, and reporting on energy and water use trends in the City;
- With the assistance of the Municipal Conservation Committee, developing and implementing an ongoing employee education/awareness campaign on how and why employees can be energy and water efficient in the workplace; and
- Developing guidance and/or examples for using life cycle cost analysis in planning and designing energy and water use efficiency into a major remodel or new construction project.

Project managers responsible for new and major remodels of City facilities and

landscapes shall ensure that the projects are designed, constructed, and commissioned to be state-of-the-art water and energy efficient based on a life cycle cost analysis.

Using software that is standard Citywide, departments shall be responsible for monitoring the energy and water use of buildings, facilities, and landscapes they operate.

6.11.6 References

- Seattle City Light, *Energy Management Services Plan* (1996).
- Seattle Public Utilities, *Long Term Conservation Plan* (1996).

6.12 WASTE REDUCTION AND RECYCLING

6.12.1 Purpose

To establish goals and procedures for City departments to reduce solid waste and increase recycling, consistent with Seattle's Solid Waste Plan.[12]

6.12.2 Organizations Affected

All City departments are affected.

6.12.3 Definitions

Composting: Controlled aerobic decomposition of organic materials such as grass clippings, brush, weeds and food scraps, yielding a product that can be used as a soil conditioner.

Recycling: Separating certain materials (such as paper, metal, glass, and plastic containers) from the solid waste stream for re-manufacturing into usable or marketable materials.

Solid Waste: All putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, yard waste, ashes, industrial wastes, infectious wastes, swill, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials. This includes all liquid, solid, and semisolid materials that are not the primary products of public, private, industrial, commercial, mining, and agricultural operations. Solid waste includes, but is not limited to, sludge from wastewater treatment plants, septage from septic tanks, wood waste, dangerous waste, and problem wastes.

Waste Reduction: Reducing the generation of solid waste by reusing materials, re-designing processes, or reducing the toxicity of solid waste.

6.12.4 Policy

The City shall reuse its goods and recycle its solid waste in a manner that complies with all applicable laws and regulations.

The following priorities for the management of solid waste, followed in descending order as applicable,[13] shall guide the City's operations:

- Reducing waste by avoiding unnecessary purchases;
- Reusing surplus products;
- Procuring reusable products, recycled-content products, and recyclable products;
- Recycling or composting wastes to the maximum extent practicable; and
- Landfilling wastes.

City departments shall implement waste reduction and recycling programs described in Seattle's Solid Waste Plan.

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[12] Seattle Public Utilities. *On the Path to Sustainability: Seattle's Solid Waste Plan*, August 1998.

[13] Related policies being developed under the Environmental Management Initiative include Environmentally Responsible Purchasing, Chemical Use, Hazardous Waste Management, Landscape & Grounds Management, and Fleet policies.

6.12.5 Procedures and Responsibilities

The Director of the Executive Services Department (ESD) shall be responsible for:

- Designating a Citywide recycling coordinator to manage and maintain recycling programs for City departments;
- Developing and managing contracts for recycling services for City facilities;
- Ensuring that all buildings and facilities occupied by City employees have collection services in place to allow recycling of the following: mixed paper, cardboard, aluminum cans, glass bottles and jars, and #1 and #2 plastic bottles;
- Tracking and evaluating data on annual waste generation and recycling rates of City departments, as well as savings associated with avoided disposal costs, and revenue generated from waste recycling;
- Developing equipment and service specifications and contracts that support the City's waste reduction and recycling goals; and
- Ensuring that policies and procedures for disposition of surplus property maximize opportunities for reuse of materials both within City departments and by external parties.

The Director of Seattle Public Utilities shall be responsible for providing technical assistance and education to City departments on waste reduction and recycling issues related to Seattle's Solid Waste Plan.

The director of each City department shall be responsible for:

- Designating a recycling coordinator to promote recycling and waste reduction within the department and to serve as a liaison between the department and the City's Recycling Coordinator;
- Ensuring that recyclable paper, cardboard, aluminum, glass, plastic, green waste, and construction, demolition, and land-clearing waste are recycled or reused to the maximum extent practicable;
- Ensuring that any concrete, cement, or asphalt (as defined in SMC Section 3.18.902) generated in City street, bridge, drainage, or other public works projects, whether those projects are performed by the City or under contract with the City, is recycled or reused unless its quality or quantity preclude efficient recovery by a recycling facility;[14] and
- Ensuring departmental implementation of other practicable waste reduction, composting, and recycling methods.

6.12.6 References

- *On the Path to Sustainability: Seattle's Solid Waste Plan*, Seattle Public Utilities. August 1998.
- *On the Road to Recovery: Seattle's Integrated Solid Waste Management Plan*, Seattle Solid Waste Utility. August 1989.

[14] Reference: SMC 21.36.088.

6.13 LANDSCAPE AND GROUNDS MANAGEMENT

6.13.1 Purpose

The purpose of this policy is to ensure that City landscapes are designed, constructed, and maintained in a manner that protects and enhances our region's natural resources and public health; that City landscapes are models of environmental stewardship in the eyes of the public; that the City establishes a leadership role in developing both aesthetically pleasing and ecologically sensitive landscapes; and that there is a consistent standard of environmental stewardship observed by City departments managing landscapes and other grounds.

6.13.2 Organizations Affected

All City departments responsible for managing construction projects or managing City-owned grounds and landscapes are affected.

6.13.3 Definitions

Integrated Pest Management: A pest management process that uses monitoring to determine pest injury levels and combines biological, cultural, physical, and chemical tools to minimize health, environmental and financial risks. The method uses the least toxic synthetic pesticides only as a last resort to controlling pests.

Sustainable Design, Construction, and Maintenance: Principles, materials, and techniques that conserve natural resources and improve environmental quality throughout the life cycle of the landscape and its surrounding environment.

Landscapes: Grounds that are actively managed such as parks, library lawns, right-of-ways, in-town watersheds, etc., but not large tracts of forest land like the Cedar River Watershed.

Water Budget: A set of month-by-month estimates of irrigation water use for a specific landscape taking into account plant material, soil type, type of irrigation system, and average weather conditions. The annual budget is the sum of all the monthly budgets.

Evapotranspiration (ET): The sum of the water lost from the soil surface and water use by plants.

6.13.4 Policy

In planning, siting, designing, constructing, and maintaining grounds and landscapes owned and managed by the City, site objectives shall include management and maintenance practices that protect and enhance natural ecosystems. City grounds designers, planners, managers, crews, and their contractors shall give priority to:

A. Maximizing water use efficiency (see Energy and Water Conservation Policy);
B. Practicing the principles of Integrated Pest Management including the reduced use of pesticides (see also Chemical Use Policy);
C. Reducing and reusing landscape waste materials through practices such as mulch mowing, mulching and composting;

D. Selecting and using fertilizers that minimize negative impacts on soil organisms and aquatic environments;
E. Designing new and renovating existing landscaped areas to suit the site conditions and with sustainable maintenance in mind. For example:

- Using proper soil preparation and amendment;
- Specifying weed-free soil amendments;
- Using mulches to control weeds, conserve water, and build healthy, biotically diverse soils;
- Using site adapted and pest resistant plants: "the right plant for the right place";
- Grouping together plants with similar horticultural needs;
- Retaining and using regionally native plant material where appropriate;
- Controlling noxious weeds and invasive, non-native, plant species;
- Planting for erosion and weed control;
- Assessing whether landscapes can still meet the intended site use objectives while modifying the aesthetic standard and/or applying less maintenance; and
- Matching maintenance standards to site objectives in the design stage.

F. Restoring, creating, and protecting environmentally valuable areas such as wetlands and riparian, aquatic, wildlife, forest, and meadow habitats. Protection shall include avoiding developing these areas whenever feasible.

G. Increasing the City's tree canopy. Trees contribute numerous environmental benefits including reducing the build-up of atmospheric carbon dioxide; absorbing atmospheric pollutants; and slowing the rate of precipitation which allows increased infiltration and reduced run-off, slope stabilization, and wildlife habitat.

- City departments responsible for open space and public rights of way shall give priority to:

  (a) Significantly increasing the number of trees in rights of way and open spaces;
  (b) Replanting in parks and open spaces where trees are mature and nearing the end of their life cycle;
  (c) Working with community and neighborhood interest groups to involve them in planting and maintaining the urban forest.

- City departments managing construction projects shall give priority to incorporating into the construction design any existing, healthy, mature trees on the building site or, alternatively, to moving such trees.

6.13.5 Procedures and Responsibilities

City departments responsible for managing landscaped areas shall provide training to grounds management and maintenance staff. The purpose of the training is to acquaint staff with this policy and to keep staff current with best landscape-management practices and technologies.

City departments responsible for managing landscaped areas shall prepare water shortage contingency plans for water shortage events such as droughts.

City departments shall implement procedures that ensure that contractors and vendors are knowledgeable about and comply with this policy.

In making landscaping staffing and budget decisions, departments shall consider the potential environmental tradeoffs; for example, will reduced staffing require increased use of pesticides to maintain the landscape at the same standard?

An interdepartmental Grounds Management Committee shall meet regularly to coordinate activities, share resources, plan training, exchange information, set goals, evaluate progress, and periodically review this policy and update it as necessary.

Designs for new or renovated landscapes shall include maintenance plans, which shall conform to the requirements of this policy. Pesticides shall be selected using the guidelines provided in the Chemical Use Policy. City departments responsible for grounds management shall establish a water budget for all irrigated landscapes larger than 0.5 acres that are not controlled by ET based systems.

Landscape design, installation, or maintenance contracts shall require contractors and vendors to comply with this policy.

Department heads shall be responsible for:

- Ensuring that departmental procedures, budget, and staffing decisions support implementation of this policy;
- Providing training to grounds management staff in the requirements of this policy; and
- Appointing a staff person to the Grounds Management Committee to represent the department on matters related to this policy.

The Office of Sustainability & Environment (OSE) shall be responsible for:

- Providing staff support to the Grounds Management Committee; and
- Facilitating interdepartmental resource sharing.

6.13.6 References

- City of Seattle, *Landscape and Grounds Management Guidelines: Environmental Stewardship* (1999).
- Related Policies: Energy and Water Conservation Policy and Chemical Use Policy.

6.14 ENVIRONMENTALLY RESPONSIBLE PURCHASING

6.14.1 Purpose

To expand and promote the City's use of environmentally preferable products and services.

6.14.2 Organizations Affected

All City departments and offices that make purchases of any kind or that contract with others to make purchases.

6.14.3 Definitions[15]

Environmentally Preferable Product: A product that has a lesser or reduced negative effect on human health and the environment when compared with competing products that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and disposal of the product. This term includes, but is not limited to, recyclable products, recycled products, and reusable products.

Life Cycle Analysis: The comprehensive examination of a product's environmental and economic effects throughout its lifetime, including new material extraction, transportation, manufacturing, use, and disposal.

Practicable: Satisfactory in performance and available at a fair and reasonable price.

Recyclable Product: A product that, after its intended end use, can demonstrably be diverted from the City's solid waste stream for use as a raw material in the manufacture of another product, preferably higher value uses.

Recycled Product: A product containing recycled material.

Reusable Product: A product, such as a washable food or beverage container or a refillable ballpoint pen, that can be used several times for an intended use before being discarded.

6.14.4 Policy

The City shall acquire its goods and services in a manner that complies with federal, state, and City laws. The City shall promote the use of environmentally preferable products in its acquisition of goods and services. Environmental factors to be considered in selecting products include life cycle analysis of:[16]

- Pollutant releases;
- Waste generation;
- Recycled content;
- Energy consumption;
- Depletion of natural resources; and

[15] From SMC 3.18 or federal Executive Order

[16] Refer to chemical use policy for criteria for hazardous materials.

- Potential impact on human health and the environment.

City departments shall use, where practicable, reusable products, recycled-content products, and recyclable products.

Recognizing its role as a major purchaser of goods and services, the City shall seek opportunities to enhance markets for environmentally preferable products through employee education; encourage pilot testing of potential new products; adopt innovative product standards, specifications, and contracts; and embark on cooperative ventures with other jurisdictions.

6.14.5 Procedures and Responsibilities

6.14.5.1 Product Standards

The Director of the Executive Services Department (ESD) shall be responsible for:

- Adopting standards that specify minimum recycled content, recyclability, reusability, or other aspects of environmental preferability, consistent with the U.S. Environmental Protection Agency (USEPA) and Washington State standards.[17] In no case shall these standards be less stringent than USEPA standards. In addition, ESD may adopt standards for products that have not been addressed by USEPA or Washington State;
- Encouraging pilot testing for environmentally preferable products; and
- Consulting with the appropriate departments regarding technical and performance specifications of products in those situations where a department has specific expertise in the use of a product or the establishment of a product's performance specifications.

6.14.5.2 Specifications and Contracts

The Director of the ESD shall be responsible for:

- Revising existing procurement policies and specifications to ensure that they include environmentally preferable standards, unless a recycled content or recyclable or reusable product does not meet the established performance standard of a department;
- Considering environmentally preferable factors in evaluating responsiveness of prospective bidders and establishing price preferences, if applicable, in its procurement of goods and services; and
- Utilizing expertise of City staff, through user-groups or other means, to pilot-test environmentally preferable products.

The director of each City department shall require, whenever practicable, its vendors, contractors, and consultants to use recycled-content paper on all documents submitted to the City and to use other environmentally preferable products, as appropriate.

6.14.5.3 Education and Technical Assistance

The Director of the ESD, in conjunction with the Director of Seattle Public Utilities, shall be responsible for establishing user-friendly tools to disseminate information to

[17] Recyclability shall be determined by whether in-City collection systems are in place to divert the material from solid waste for use as a material in the manufacture of another product or the reuse of the same products (SMC 3.18.908).

City staff about reusable, recycled content, recyclable, and otherwise environmentally preferable products; about vendors and City contracts for such products; and about user groups and other opportunities to test and discuss new products.

The director of each City department shall be responsible for:

- Ensuring departmental use, where practicable, of environmentally preferable products through training, information dissemination, development of internal procedures, and other means; and
- Ensuring departmental participation in user groups, pilot testing programs for new products, and other citywide efforts established to implement this policy.

6.14.5.4 Data Collection and Performance Reporting

The Director of the ESD shall be responsible for:

- Working with other departments to design and implement a data collection system for performance tracking and evaluation of the City's environmentally responsible purchasing program; and
- Compiling records for the purposes of producing an annual summary of the City's environmentally responsible purchasing actions, and for evaluating the effectiveness of these actions in reducing the environmental impacts of City procurement.

The director of each City department shall cooperate in information gathering for the purposes of tracking, reporting, and evaluating the environmentally responsible purchasing program.

6.14.5.5 Market Enhancement

The Director of the ESD shall be responsible for:

- Seeking opportunities to cooperate with other jurisdictions to enhance markets for environmentally preferable products, to obtain favorable prices, and to reduce waste packaging and product by combining purchases/contracting for the same or similar products; and
- Promoting the use of recycled-content products, recyclable products, and other environmentally preferable products to potential vendors to the City by publicizing their availability.[18]

6.14.6 References

- Resolution 27828, directing Solid Waste to develop policies and practices to encourage, increase, and require recycling, waste reduction, and the purchase of recycled products.
- Resolution 28556, authorizing the Director of ESD to develop a "Recycled-content Procurement Plan."
- Seattle Municipal Code 3.18.900 - 926 (Ordinance 116720 and 116726).
- U.S. Executive Order 12873 and *"Greening the Government: A Guide to Implementing Executive Order 12873."*

[18] per SMC 3.18.904E.

6.15 FLEET MANAGEMENT

6.15.1 Purpose

The purpose of this policy is to achieve an overall reduction in air emissions produced by City vehicles and to reduce the amount of fossil fuels purchased and used for vehicles.

6.15.2 Organizations Affected

The Executive Services Department (ESD) and all City departments using vehicles are affected.

6.15.3 Definitions

Alternative Fueled Vehicle: A dedicated vehicle or a dual-fueled vehicle that operates on electricity or fuels other than straight gasoline or diesel.

6.15.4 Policy

The City shall decrease the amount of gasoline and diesel used in City vehicles and equipment by increasing the fuel economy of its vehicles, increasing their operational efficiency and by reducing the number of vehicle miles traveled per employee. The City shall limit its purchase of sport utility vehicles and similar specialty vehicles to situations where there is a clear business need for such vehicles. The City shall increase its use of fuel types that emit low or no carbon dioxide or other pollutants.[19] The City shall use recycled antifreeze, re-refined oil, and retread tires in City vehicles to the maximum extent practicable.

6.15.5 Procedures and Responsibilities

The Director of the ESD shall develop average fuel economy standards for each department to achieve when ordering new vehicles. ESD will work with departments to ensure that the standards are understood and that the fuel economy standard for the City fleet is achieved.

When making vehicle-purchasing decisions, the ESD shall consider available standardized data on environmentally preferable products. (See Environmentally Responsible Purchasing Policy.)

Department directors who have alternative fueled vehicles assigned to their departments shall develop procedures to ensure maximum usage of these vehicles.

The Office of Sustainability & Environment (OSE) and the ESD shall jointly develop and implement a user awareness program to educate City employees on how they can help achieve the purposes of this policy. Examples include encouraging use of compressed natural gas (CNG) vehicles and other alternative fueled vehicles, reducing vehicle idling, and encouraging use of transit when appropriate.

[19] A substantial increase in use of alternative fuels implies a City investment in traditional cng fueling stations and/or electric charging stations. Once a plan for the City's use of alternative fueled vehicles is complete, including a benefit cost analysis, this policy will be revised accordingly.

The ESD and Seattle City Light shall collect data and report annually to the Office of Environmental Management on:

- Total vehicle miles traveled in gasoline vehicles and in diesel vehicles;
- Total vehicle miles traveled in alternative fuel vehicles; and
- Total gallon equivalents or gallons purchased of gasoline, CNG, propane, electricity and diesel.

6.15.6 References

- Energy Policy Act of 1992
- Clean Air Act
- Puget Sound Clean Cities Program Plan

6.16 EMERGENCY RESPONSE (TO BE ADDED)

6.17 TRAINING (TO BE ADDED)

PART C

BIENNIEL ACTION PLAN

The Biennial Action Plan is a working document and will not be included in this manual. If you wish to receive the most current document please contact:

Julie Tobin

Office of Environmental Management

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APPENDICES

APPENDIX A

INFORMATION ON ISO 14000

APPENDIX B

ROLES AND RESPONSIBILITIES FOR ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL COORDINATING COMMITTEE
CHARTER

Purpose

The purpose of the Environmental Coordinating Committee (ECC) is to provide a forum for discussion, coordination, and joint resolution of environmental issues within the City. This committee is responsible for making sure that similar environmental issues are handled consistently across departments and functions, and for identifying and implementing solutions to more efficiently utilize the City's resources with respect to environmental concerns. The Committee is also responsible for promoting high environmental standards in all City operations and assisting the City in moving toward environmental sustainability in all of its actions and programs.

Functions

Information Sharing and Discussion

- Provide a forum for sharing information on environmental issues of mutual interest so departments can coordinate activities and learn from each other's successes and failures.
- Assist members in their professional growth and development by sharing information on conferences, journal articles, training opportunities, etc.

Monitor Implementation of the City's Environmental Management Program

- Promote the program's goals and policies by reporting on each department's implementation, progress, and problems, sharing information, encouraging collaboration among departments, and sharing successes and models.
- Assist the Office of Environmental Management and the Environmental Oversight Committee in preparing biennial action plans and reviewing the City's environmental performance.
- Assist the Office of Environmental Management and the Environmental Oversight Committee in establishing environmental indicators and targets.

Coordinate Environmental Programs and Activities

- Identify issues that are best addressed on a Citywide basis and facilitate joint resolution of such issues.
- Promote effective and efficient use of resources allocated to environmental management and compliance activities across departments.
- Coordinate City comments on local, state and federal environmental regulations, and share information on significant interactions with local, state and federal regulatory and resource agencies.

Advise Executive on Environmental Issues and Priorities

- Advise the Office of Environmental Management and Mayor Office on environmental risks, priorities, and strategies.
- Assist the Central Budget Office in determining environmental priorities for the budget.
- Assist OIR in developing and coordinating City positions on proposed state and federal environmental legislation.

Committee Structure

The ECC membership will include at least one representative and an alternate from each of the following departments or functions:

Seattle Public Utilities,
Seattle City Light,
SEATRAN,
Parks and Recreation,
Seattle Center,
Executive Services Department,
Strategic Planning Office,
Construction and Land Use,
Police Department,
Fire Department,
Office of Economic Development, and
Office of Intergovernmental Relations

Members shall be the senior executive or manager with responsibilities for the environment for that department.

The Department Director for each referenced department will appoint the representative and an alternate. Directors may appoint more than one member if necessary to represent the scope of environmental issues for a department. Names shall be submitted to the Mayor's Office for approval.

The Environmental Coordinating Committee will meet monthly, with the November and December meetings combined.

The Committee will be chaired and staffed by the Office of Environmental Management.

HAZARDOUS MATERIALS COMMITTEE CHARTER

The Hazardous Materials Committee is established to accomplish the following:

- Provide a forum to share information on best practices among City departments in managing hazardous materials and waste;
- Assist City departments in maintaining compliance with relevant regulatory requirements (see list below);
- Promote consistency among City departments in interpreting regulatory requirements and operational practices;
- Improve efficiency and effectiveness of departmental operations by identifying and implementing multi-departmental approaches to common environmental problems (e.g. preferred provider arrangements, sharing resources, etc);
- Promote regulatory compliance and pollution prevention in operations involving hazardous materials and/or hazardous waste; and
- Assist the Office of Environmental Management in implementing the following Environmental Management Program policies:
  - ✓ Compliance Assessment
  - ✓ Hazardous Waste Management
  - ✓ Chemical Use, Hazard Communication
  - ✓ Abandoned Waste
  - ✓ Site Remediation
  - ✓ Petroleum Storage Tanks.

Relevant Regulatory Requirements

Resource Conservation and Recovery Act
Washington Dangerous Waste Regulations
Federal and State Underground Tank Regulations
Washington Hazardous Waste Reduction Act
Toxic Substances Control Act
State Model Toxics Control Act
Comprehensive Environmental Response Compensation and Liability Act
Superfund Amendments and Reauthorization Act
Emergency Planning Community Right to Know Act

Member Responsibilities

1. Representatives serve as the point of contact for departmental staff and management, including reporting to management and departmental staff and obtaining feedback on issues addressed by the committee. Members will also coordinate meeting attendance by other relevant departmental staff, as necessary.

2. Periodically review policies and procedures included in the Environmental Management Program (EMP) related to hazardous materials and hazardous waste to ensure continual improvement. Provide any recommendations for revisions to the Office of Sustainability & Environment (OSE).

3. Work with the OSE to develop implementation strategies and identify associated resource impacts for EMP policies and procedures related to hazardous materials and waste.

4. Review proposed rule makings related to referenced regulatory areas on issues of citywide interest and provide comment to the OSE, which will work with the City Attorney's Office to coordinate a citywide response.

5. Provide technical support for contracting for citywide services related to hazardous materials and hazardous waste (hazardous waste disposal, hazardous materials recycling, etc), including preparation of technical specifications for services.

6. Exchange information and ideas among persons from all City departments who deal with issues related to hazardous materials and hazardous waste.

7. Prepare an annual work plan and annual report on work accomplished during the year to be submitted to the OSE for incorporation, as appropriate, in the OSE work plan and biennial environmental report.

Committee Structure

1. The HMC membership will include at least one representative and an alternate from each of the following departments or functions with significant responsibilities related to hazardous materials and waste:

   Seattle Public Utilities
   Seattle City Light
   SEATRAN
   Parks Department
   Seattle Center
   Executive Services Department (representing department operations)
   City Safety Office
   City Purchasing Office
   Police Department
   Fire Department
   Library
   City Attorney's Office

2. The representatives, and an alternate, will be appointed by the Department Director for each referenced department, or the Division Director for each referenced office. Representatives should allocate approximately 12 hours per month to HMC activities. Additional hours may be necessary for tasks such as contract specification development, and vendor audits.

3. The OSE will chair the committee and provide staff support.

4. The committee will:
   - ✓ Meet monthly
   - ✓ Develop an annual work plan by March 1
   - ✓ Prepare an annual accomplishments report by February 1 for the prior year
   - ✓ Form subcommittees from the membership or coordinate subcommittee membership with other relevant departmental staff, as necessary, to perform identified functions.

Reporting Structure

1. The HMC will report to the OSE through the Committee Chair.
2. HMC members will report to their department management as appropriate.
3. The HMC may direct significant issues to the Environmental Coordinating Committee as necessary, for the purpose of reporting, seeking guidance, and addressing departmental resource issues.

GROUNDS MANAGEMENT TASK FORCE CHARTER

The Grounds Management Task Force (GMTF) is established to accomplish the following:

- Provide a forum to share information on environmental best practices among City departments who manage landscapes and grounds;
- Assist City Departments to balance environmental stewardship, aesthetic goals, and maintenance issues;
- Promote management and maintenance practices that protect and enhance natural ecosystems;
- Improve efficiency and effectiveness of departmental operations by identifying and implementing multi-departmental approaches to shared environmental issues such as compost management and training;
- Promote integration of Landscape and Grounds Management Guidelines into planning, construction, and maintenance of City landscapes and grounds; and
- Assist the Office of Environmental Management in implementing the following Environmental Management Program (EMP) Landscape and Grounds Management Policy elements:

    - ✓ Maximize Water Use Efficiency
    - ✓ Practice Integrated Pest Management
    - ✓ Reduce and Reuse Landscape Waste
    - ✓ Select and Use Fertilizers That Minimize Negative Impacts
    - ✓ Design Landscaped Areas to Suit Site Conditions
    - ✓ Restore, Create, and Protect Environmentally Valuable Areas

Member Responsibilities

1. Representatives serve as the point of contact for departmental staff and management, including reporting to management and departmental staff and obtaining feedback on issues addressed by the committee. Members will also coordinate meeting attendance by other relevant departmental staff, as necessary.

2. Periodically review policies and procedures included in the EMP related to landscape and grounds management to ensure continual improvement. Provide any recommendations to the Office of Sustainability & Environment (OSE).

3. Work with the OSE to develop implementation strategies and identify associated resource impacts related to landscape and grounds management.

4. Exchange information and ideas among persons from all City departments who deal with issues related to landscape and grounds management.

5. Prepare an annual work plan and annual report on work accomplished during the year to be submitted to the OSE for incorporation, as appropriate, in the OSE work plan and biennial environmental report.

Committee Structure

1. The GMTF membership will include at least one representative and an alternate from each of the following departments or functions with significant responsibilities related to landscape and grounds management:

   Seattle Public Utilities
   Seattle City Light
   SEATRAN
   Parks Department
   Representative for each Division
   Horticulturist
   Seattle Center
   Executive Services Department
   Library

2. The Department Director for each referenced department will appoint the representatives, and an alternate. Representatives should allocate approximately 2 hours per month to GMTF activities.

3. The OSE will chair the committee and provide staff support.

4. The committee will:
   - ✓ Meet every other month (modification to the schedule may be made based on seasonal demand)
   - ✓ Develop an annual work plan by March 1
   - ✓ Prepare an annual accomplishments report by February 1 for the prior year.

Reporting Structure

1. The GMTF will report to the OSE through the Committee Chair.

2. GMTF members will report to their department management as appropriate.

GREEN BUILDING TEAM CHARTER

The Green Building Team (GBT) is established to accomplish the following:

- Increase the green building performance of city capital projects and facilities.
- Provide a forum to share information on sustainable design and construction practices among City Departments who finance, plan, design, build, remodel, and maintain facilities.
- Encourage City Departments to balance social, economic, and environmental factors related to project design and construction.
- Promote consistency and a common understanding among City Departments of sustainable design, construction, and maintenance practices and benefits.
- Improve efficiency and effectiveness of departmental operations by identifying and implementing multi-departmental approaches to sustainable building problems.
- Promote excellence and innovation in operations involving sustainable building.
- Assist the Office of Environmental Management in implementing the following Environmental Management Elements:

A. Project Development and Programming
    1. Sustainable Design Process and Consultant Procurement
    2. Design Integration Goals
    3. Life Cycle Cost Analysis
    4. Programming for Sustainability
    5. Sustainable Building Rating Systems

B. Design
    1. Energy Efficiency
    2. Water Efficiency
    3. Lighting Design
    4. Efficient and Environmentally Appropriate Use of Materials
    5. Building Longevity/Flexibility/Adaptability
    6. Pollution Prevention
    7. Indoor Air Quality/Indoor Environmental Quality
    8. Green Material Specification
    9. Crime and Graffiti Prevention Design
    10. Low Maintenance Design
    11. Sustainable Landscape/Site Planning Issues
    12. Building Commissioning

C. Construction/Installation
    1. Construction and Demolition Waste Reduction
    2. Green Building Remodeling
    3. Indoor Air Quality & Installation Issues
    4. Worker Health & Installation Issues

D. Operations and Maintenance
    1. Green Operations and Maintenance
    2. Green Building Project Development Staff Training
    3. Green Building Occupant Behavior
    4. Post-Occupancy Evaluation and Building Monitoring

Member Responsibilities

1. Serve as the point of contact for departmental staff and management, including reporting to management and departmental staff and obtaining feedback on issues addressed by the committee. Members will also coordinate meeting attendance by other relevant departmental staff, as necessary.
2. Periodically review city CIP projects and provide input to city staff or consultants. (Committee members may choose whether to participate in this portion of committee work, which will be clearly delineated in meeting agendas. The first hour of meetings will be dedicated to actual design and construction projects, the second hour to guideline development.)
3. Periodically review policies and procedures included in the Environmental Management Program related to green building to ensure continual improvement. Provide any recommendations for revisions to the Office of Sustainability & Environment (OSE).
4. Work with the OSE to develop implementation strategies and identify associated resource impacts for EMP policies and procedures related to green building.
5. Provide technical support for contracting for citywide services related to green building, including regarding technical specifications for services and RFQ/RFP language. Provide briefings to consultant selection committees as needed.
6. Exchange information and ideas among persons from all City departments who deal with issues related to sustainable design and construction.
7. Prepare an annual work plan and annual report on work accomplishments during the year to be submitted to the OSE for incorporation, as appropriate, in the OSE work plan and biennial environmental report.

Committee Structure

1. The GBT membership will include at least one representative and an alternate from each of the following departments or functions with significant responsibilities related to sustainable building:

   Seattle Public Utilities
   Seattle City Light
   Strategic Planning Office
   Executive Services Department
   Office of Environmental Management
   Department of Design, Construction and Land Use
   Lighting Design Lab
   City Libraries (currently vacant)
   Parks (currently vacant)
   Seattle Center (currently vacant)

2. Regular meetings of the GBT will be held at a time and place agreed to by committee members.
3. The representatives should allocate from six to 12 hours per month to GBT activities. Additional hours may be necessary for tasks such as detailed guideline development or project assistance.
4. SPU, Resource Conservation will chair the committee with staff support from OSE.
5. The GBT will report to the Office of Environmental Management.

APPENDIX C

SUMMARY OF ENVIRONMENTAL LAWS AND REGULATIONS AFFECTING CITY OPERATIONS

Selected Environmental Laws & Regulations Affecting City of Seattle Operations

This document is intended to provide a sampling of selected federal, state, and local regulations that govern City operations. City departments are responsible for determining what statutes and regulations apply to their activities, and for tracking regulatory changes.

1. Water

- Clean Water Act (33 USC 125 et seq.; 40 CFR 100-140)
- Washington Water Pollution Control Act (RCW 90.48; WAC 173-200 et seq.)
- County on-site sewage systems regulations (Title 13, Code of the King County Board of Health) (RCW 43.20; WAC 246-272.)
- Seattle Stormwater Grading and Drainage Control Code (SMC 22.800 et seq.)
- Laws re: State Water Rights (RCW 18.104, 43.27a, 90.03, 90.14, 90.16, 90.22, 90.44, 90.54; WAC 173-100, 136, 150, 154, 166, 500, 508, 509, 510, 511, 512, 590)
- National Wild and Scenic Rivers Act (16 USC 1271-1287)
- Safe Drinking Water Act (42 USC 300f et seq.)
- Section 10 - Rivers and Harbors Act (33 U.S.C. 403)
- Food Fish – Construction in State Waters (RCW Ch. 75.20.040 et seq.)
- Game Fish - Diversion of Water (RCW 77.16.220)
- Well Code (incl. WAC 173-160)
- Title 12, Code of King Co. Board of Health (RCW 43.20; WAC 246-290)
- Clean Water Act, Section 404
- Washington State Hydraulics Code (RCW Ch. 75.20.100-140)

2. Air

- Washington Clean Air Act (RCW 70.94; WAC 173-402-010, 020)
- Federal Clean Air Act (42 USC 7401 et seq.)
- Local Air Pollution Control Agency Regulations

Selected Environmental Laws & Regulations Affecting City of Seattle Operations

- Local and State Air Pollution Control Agency Regulations
- Worker Health and Safety Regulations (General Occupational Health and Safety Standards, 29 CFR 1910; WAC Ch. 296-62, Part P)

- National Emissions Standards Hazardous Pollutants (Asbestos) (40 CFR Part 61)

3. Solid Waste

- Resource Conservation and Recovery Act (42 U.S.C 6901 et seq.)

- City of Seattle Flow Control Ordinance (from SMC Ch. 21.36)

- Minimum Functional Standards for Solid Waste Handling (RCW 70.95; WAC 173-304)

- King County Title 10, Health Department Rules and Regulations No. 8

- Solid Waste Management (RCW 70.95)

- Moderate Risk Waste (RCW 70.105, 70.95I)

4. Hazardous Materials and Waste

- Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments & Reauthorization Act (42 U.S.C. 9601 et. seq.)
- National Contingency Plan (40 CFR 300 et. seq.)
- Model Toxics Control Act (RCW 70.105D)
- Model Toxics Control Regulations (WAC 173-340)

- Underground Storage Tanks Resource Conservation and Recovery Act (42 USC 6991 (Subchapter IX))
- Federal Underground Tank Regulations (40 CFR 280)
- State and Regional Tank Law and Regulations (RCW 90.75; WAC 173-360)
- Model Toxics Control Act Regulations (WAC 173-340-450)

- Sediment management standards (RCW 70.105D, 90.48, 90.70; regulations at WAC 173-204)

- Hazard Communication Standard (OSHA Regulations, 29 CFR 1910; General Occupational Health Standards, WAC 296-24 & Hazardous Waste Operations and Emergency Response 296-62, part P)

Selected Environmental Laws & Regulations Affecting City of Seattle Operations
• PCB Management (Toxic Substances Control Act, incl. 15 USC 2605 (e); PCB regulations, 40 CFR Part 761; Dangerous Waste Regulations, WAC Ch. 173-303)
• Pollution Prevention (WA Hazardous Waste Reduction Act, RCW 70.95 Pollution Prevention Regulations, WAC 173-305)
• Transportation of Hazardous Materials, CDL requirements (Hazardous Materials Transportation Act, 49 USC 5101et seq.; DOT regulations, 49 CFR Part 100 et seq., incl. 107, 171). Also overlaps with hazardous waste regulations.
• Federal Insecticide, Fungicide & Rodenticide Act (7 U.S.C. 135 et seq.)
• Seattle Fire Code and other local jurisdiction fire codes
• Washington Dangerous Waste Regulations, (WAC 173-303 and Federal RCRA 42 U.S.C. 6901 et seq.) • Hazardous Waste Management Act (RCW 70.105)
• Emergency Planning & Community Right-To-Know (SARA Title III)
• Federal Power Act (16 USC 791a-828)
• Electric Consumer Protection Act (P.L. 99-495)
• Northwest Electric Power and Conservation Act (P.L. 96-501; 16 USC 839-839h)
• Energy Facility Site Evaluation (RCW 80.50; WAC Title 463)

6. Environmental Review
• State Environmental Policy Act (SEPA) (RCW 43.21C; WAC 197-11; SMC Chapter 25.05)
• National Environmental Policy Act (NEPA) (42 USC 4321 – 4370)

7. Historic and Archeological
• National Historic Preservation Act (NHPA) (16 USC 470) • Archeological and Historic Preservation Act (16 USC 469) • Regulations implementing the NHPA (36 CFR Part 800)
• Washington State Archeological Approval (Executive Order 11593)

Selected Environmental Laws & Regulations Affecting City of Seattle Operations

8. Other Federal Regulations

- Endangered Species Act (16 USC 1531 et seq.)
- North Cascades National Park Act (16 USC 90e-93)
- Archeological Excavation Regulations (RCW 27.44, 27.53; WAC 25-48)

9. Other State and Local Government Requirements

- Coastal Zone Management Act (16 USC 1451 et seq.)
- Shoreline Management Act (RCW 90.58; WAC 173-16, et seq.; SMC 23.60)
- Seattle Environmentally Critical Areas Ordinance (SMC 25.09) and other jurisdictions (sometimes called Sensitive Areas Ordinance)
- Washington State Forest Practices Act (RCW 76.09; WAC Title 222)
- Washington State Maximum Environmental Noise Levels (WAC 173-60)
- Local Government Noise Ordinances (including SMC 25.08)
- Local Government Land Use and Construction Codes
- Stormwater Grading and Drainage Control Code (SMC 22.800 et. seq.)
- Local Sensitive Areas Ordinance
- Uniform Fire Code and Seattle Fire Code or Other Local Amendments
- Growth Management Act (RCW 36.70A)

APPENDIX D

SEATTLE ENVIRONMENTAL DUE DILIGENCE POLICY

City of Seattle Environmental Due Diligence Policy

I. Purpose

Environmental due diligence is a component of prudent due diligence for any real property transaction; thus, it should be integrated into a general due diligence policy for real property transactions. The purpose of environmental due diligence is to gather reliable information about the environmental condition of real property subject to a transaction. City decision-makers will use this information to decide whether to go forward with the transaction and, if the transaction is pursued, then to structure the transaction to minimize legal liability and fairly allocate the environmental risk and cost of any necessary cleanup. This policy requires City departments to perform environmental due diligence pursuant to the guidelines set out below.

II. Background

A. Overview

Environmental due diligence in connection with the acquisition or disposition of any interest in real property (including a security interest) is a form of risk management. In simplest terms, it is a two step process: (1) reviewing the baseline environmental condition of the real property, and thus its environmental risk; and (2) structuring the acquisition or disposition of the real property to allocate the risk and protect the City from significant future risks. The City's environmental due diligence process may require the involvement of a City department's property management and environmental protection staff, the Environmental Protection Section of the City Attorney's Office and, possibly, a qualified environmental consultant or contractor.

B. Applicable Legal Risks

The legal risk presented by the environmental condition of the property is the risk of liability in two major areas: (1) a state or federal government environmental enforcement action; or (2) a third party claim or lawsuit by nearby property owners or others affected by the condition of the property.

1. Federal or State Enforcement Actions

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), codified at 42 U.S.C. §§ 9601-9675, the so-called "Superfund," was enacted to remediate sites contaminated by hazardous substances. Under CERCLA, current owners, as well as persons or entities who owned or leased the property at any time during the disposal of hazardous substances may be liable. In some circumstances, a continuing release, such as a slow leak or "sweating" from an underground hazardous chemical storage tank, has been considered a disposal. Liability is strict, joint and several, meaning that even a short-term passive owner who did not cause the release or contamination may be liable for all cleanup costs without regard to fault, i.e., any finding of negligence.

CERCLA provides very limited defenses to this liability. For instance, the "innocent purchaser" defense, which exempts some purchasers from CERCLA liability, requires that the purchaser establish that, at the time the property was acquired, the person had no knowledge of or reason to know that any hazardous substance had been disposed of or released at the site.

To show that the buyer "had no reason to know," the statute requires that the prospective buyer must undertake "all appropriate inquiry" into the previous ownership and uses of the property consistent with good commercial or customary practice. To determine whether a person qualifies as an "innocent purchaser" the courts have considered:

* The buyer's specialized knowledge or experience;
* The relationship between the purchase price and the value of the property;
* Commonly known or reasonably ascertainable information about the property;
* The obviousness of the presence or likely presence of contamination; and
* The ability to detect such contamination by "appropriate inspection."

This same defense is available under the Washington Model Toxics Control Act (MTCA), (R.C.W. Chapter 70.105D), our state version of Superfund, which has similar liability and limited defense provisions. The definition of hazardous substances under MTCA, however, is even broader than in federal law because it includes petroleum products, which are exempt under CERCLA. This distinction is significant because leaking underground fuel storage tanks or other petroleum product contamination is common, particularly on commercial and industrial property.

Under these statutes, the U.S. Environmental Protection Agency (EPA) and State of Washington Department of Ecology (WDOE) have broad enforcement authority to name an owner, lessee or prior owner or lessee of real property as a responsible party and issue an enforcement order to investigate and clean up (remediate) the property.

2. Third Party Lawsuits

Contamination does not respect property boundaries. Thus, any property transaction must consider the possibility of off-site migration of contaminants from the property subject to the transaction onto adjoining property, or the potential for contaminants on adjoining property to migrate onto the property subject to the transaction. Third party lawsuits against an owner may be based on citizen suit provisions in CERCLA, MTCA or other environmental statutes or on common law causes of action such as negligence, strict liability, trespass and nuisance. In addition to suits for property damage or diminished property value from such contamination, an owner or lessee of contaminated property may be sued on the basis of a toxic tort personal injury claim.

C. Summary

This information is essential in deciding whether to acquire any interest in the property (fee simple, lease, license, easement or security interest, for example): Will available resources be adequate to pay for necessary cleanup? If resources are not available, then is the property suitable for the City's intended uses without expensive cleanup? Will the contamination pose a threat to the health of City employees or other users of the property? For example, indoor air quality may be a critical issue if the City leases office space or purchases an office building. Further, contamination on the target property may reduce its value for resale, or delay or increase the costs of site development.

In sum, the overarching purpose of environmental due diligence is to gather reliable information about the environmental condition of real property to decide whether to close the transaction and to structure the transaction to minimize and fairly apportion environmental liability and its financial impact.

III. Definitions

"American Society of Testing and Materials (ASTM) Guidance." ASTM provides guidance for performing transaction screenings and Phase I site assessments. Although the guidance has no specific legal effect, it is becoming widely used as a standard throughout the environmental consulting community, and courts may consider it evidence of "customary practice." The ASTM guidance consists of a detailed questionnaire concerning the historical and current uses and environmental condition of the property. A site inspection and limited regulatory records review are conducted in conjunction with completion of the ASTM questionnaire.

"Media" are the types of physical environments affected by contamination and include air, surface and ground waters, soils and sediments.

"Phase I Environmental Site Assessment (ESA)." A typical Phase I ESA consists of a regulatory records review of the site and adjoining properties, a site reconnaissance and site historical review, possibly including interviews with past owners or employees. In essence, a Phase I ESA is a broader and more detailed transaction screening.

"Phase II ESA." Phase II ESAs (media sampling and analysis) are conducted when the results of a transaction screening or Phase I reveal the existence of potential and/or actual site contamination, often signified by discolored or oily soils or surface water. A Phase II ESA is performed to verify Phase I findings, and, if possible, determine the nature and extent of the contamination.

"Qualified consultant." A qualified consultant is a professional trained to perform a transaction screening, Phase I or II ESA, or oversee the cleanup of a contaminated site. Environmental consultants are not required by the State of Washington to have professional licenses, though some specialties such as engineering or geology may have them.

"Real property transaction" means any transaction involving the acquisition or disposition of any interest in real property, including a security interest. The definition includes transactions between or among City departments. Examples include, but are not limited to: (1) buying, selling or leasing property; (2) granting or receiving an easement, license, use permit or reversionary interest; and (3) financing or guaranteeing a real property transaction or development project for the benefit of a Public Development Authority, other entity, or City Department.

"Transaction Screening" is a process used initially to decide if a Phase I site assessment is necessary. The process may be used to screen out benign sites that have an extremely low potential for environmental problems and that do not warrant a Phase I site assessment.

IV. City of Seattle Environmental Due Diligence Policy

City departments shall conduct real property transactions in a manner that minimizes the City's environmental liability while allowing the departmental mission to be performed.

City departments should provide periodic training to property management, environmental and/or other responsible staff regarding the environmental issues associated with real property transactions. This training should include knowledge of current commercial/industry standards for environmental due diligence. This policy does not prescribe what such training should

encompass. Rather, the type and degree of such training is left to the discretion of each department. The City Attorney's Office may be contacted to discuss training issues.

No real property transaction should be executed until "environmental due diligence," as defined below, has been performed with respect to that transaction. Departments are encouraged to consult with the City Attorney's Office during this process as appropriate.

"Environmental due diligence" obligates City management and staff to undertake necessary and appropriate efforts to identify and minimize legal and environmental liabilities related to real property transactions. Environmental due diligence shall include, at a minimum, a transaction screening performed by City staff or by qualified consultants. Transaction screenings shall be based on: (1) ASTM guidance; or, (2) guidance or a checklist developed by the applicable department and implemented in consultation with the City Attorney's Office.

If a transaction screening, Phase I or Phase II ESA identifies one or more significant environmental issues (e.g., an area of stained soil or leaking underground storage tanks) in the real property transaction, then the department should contact the Environmental Protection Section of the City Attorney's Office to discuss relevant legal concerns, including how to satisfy environmental due diligence, risk allocation, contract language and the applicability of environmental reporting requirements or other regulations.

V. Guidelines for Implementing the Policy

The City's environmental due diligence policy is implemented by taking two steps in the following order: (1) establishing the baseline environmental condition of the real property through a transaction screening, and, if necessary, Phase I and II ESAs; and (2) structuring the transaction based on the baseline environmental condition of the real property and the applicable law.

The first step in the environmental due diligence process is for all transactions to pass through a transaction screening. If significant environmental issues are identified in the transaction screening, then a Phase I ESA should be performed. The Phase I ESA report will reveal whether a Phase II ESA is necessary.

Phase I and II ESAs and remediation, if needed, should be performed by qualified consultants, unless the department has in-house expertise to perform a Phase I or Phase II ESA or remediation work and an independent consultant report is not needed. Qualified consultants performing Phase I ESAs for the City shall conform such ESAs to the ASTM Phase I guidance. Phase I and Phase II ESAs performed or contracted for by parties outside the City, such as prospective purchasers, sellers, borrowers (Public Development Authorities or non-profits) or tenants may be relied upon by the City only if the ESA report is reviewed and approved by either departmental environmental staff, or by a qualified consultant retained by the City.

The Environmental Protection Section of the City Attorney's Office should be consulted as appropriate throughout this process, and especially during the second step of negotiating the environmental clauses of the transaction documents to minimize the City's liability and allocate environmental risk.

A. The Site Investigation: Establishing the Baseline Condition

1. Environmental Due Diligence Should be Performed at the Outset of the Transaction

Environmental site investigation work can take months to perform depending on the complexity of the site and whether Phase II invasive procedures, such as sampling and analysis, or site cleanup is involved. Unanticipated delays may arise and necessary meetings with regulatory agencies may prolong the process. Further, the environmental condition of the property may stop the transaction; thus, performing environmental due diligence at the outset may save staff time and department money. For these reasons, environmental due diligence should be performed at the beginning of the transaction process, preferably before the department expends money on an appraisal of the site.

2. The Type of Transaction Does Not Determine the Amount of Site Investigation

There is no precise "bright-line" test for how much site investigation needs to be performed. The practical goal of the site investigation is to collect enough information to make an informed judgment about the inherent risks in the transaction, in order to insulate the City from, or fairly allocate, that risk among the parties to the transaction.

The level of investigation, i.e., whether a transaction screening is sufficient or a Phase I or II ESA is necessary, is site-specific and will depend, among other things, on the monetary value of the transaction, the intended use of the property after the transaction and the character and location of the property. The level of investigation must be based on judgment rather than simple matrices, flow charts or decision trees. Qualified consultants can assist departmental staff in making this judgment.

In determining the appropriate level of site investigation, staff should bring their experience and judgment to bear, rather than relying on labels, such as "easement" or "lease" or "use permit," to set the level of site investigation. Although easements, temporary use permits or commercial office building leases will not normally require any evaluation beyond an initial transaction screening, there are circumstances when more site investigation may be appropriate even in these types of transactions. An example is when the City is granted an easement across contaminated land and installation, operation and/or maintenance of the easement will disturb the contaminated media, such as soil.

Likewise, the character and location of real property (industrial, residential, rural, undeveloped, etc.) should not necessarily dictate the amount of site investigation. For example, unregulated dumping of hazardous waste and contaminated fill may have occurred on an undeveloped vacant lot in a residential area. Residual pesticide or herbicide contamination may be present in rural acreage, especially in old orchards.

3. Transaction Screening

The site investigation should begin with trained departmental staff initially performing a transaction screening by using the ASTM Transaction Screen Process questionnaire and guidance or some other checklist or guidance developed by the department and implemented in consultation with the City Attorney's Office. If a department does not have resources to develop screening guidance or train environmental staff, then the department may use the guidance of another department or a qualified consultant. The assigned staff is encouraged to coordinate and to consult with the City Attorney's Office and/or qualified consultants when appropriate

throughout the screening process. The amount of consultation outside the department will depend on the environmental due diligence experience and judgment of the assigned staff and the issues implicated by the specific transaction.

4. When a Phase I or II ESA May Be Appropriate

If necessary, based on the transaction screening results, the department should perform a full Phase I or Phase II environmental site assessment (ESA). For example, when the results of the transaction screening indicate the likelihood of significant site contamination based on a site inspection and historical use of the property, then the staff should consider doing a Phase I or II ESA. Before committing resources to a full Phase II ESA sampling program, it usually is more cost-effective to perform a full Phase I ESA to better ensure that all on-site and off-site areas of potential contamination are identified.

However, the department may proceed directly from a screening to an invasive Phase II ESA, which includes sampling and analysis of affected media, if the screening process identifies clearly defined areas of known or potential contamination on the property. The presence of abandoned underground storage tanks or locations with questionable site histories, such as former gasoline stations or petroleum facilities, may also warrant a Phase II ESA. Since each site is unique, all Phase II sampling plans must be individually developed, factoring in that site's particular characteristics. Phase II ESAs can only reliably characterize conditions at discrete sampling areas of the site, and provide information on requested analytical parameters. Thus, the most effective Phase II investigations focus on specific areas of concern, such as leaking underground tanks or polychlorinated biphenyl (PCB) contamination.

5. Who Should Perform a Phase I or II ESA or Remediation

Some City departments may have the in-house resources and expertise to perform Phase I or II work and remediation themselves. Nevertheless, the department should use independent qualified consultants to perform a Phase I or II or remediation if it is anticipated that an environmental claim or lawsuit related to the property will arise in the future. A departmental Phase I or II ESA might not have the credibility and scientific reliability that an independent report prepared by an outside consultant would have and might not be admissible in court.

Judgment should be brought to bear when selecting a qualified consultant. A consulting firm should be chosen based on the qualifications and reputation of the individuals within. Further, consultants should be chosen on the basis of site conditions, media affected and the scope of work under the contract. For example, if ground water contamination may be an issue, then a hydrogeologist or chemist should be retained; or, if the consultant/contractor will oversee or perform a complex site cleanup pursuant to an agency order, and must certify the completion of the cleanup, then an individual with a professional engineering license (designated "P.E.") issued by the State of Washington may be necessary. Or, if the consultant may need to speak at community meetings, give a deposition or give court testimony, then these considerations should be weighed in the selection process.

Similarly, if the discovered contamination is serious enough to warrant reporting to the Washington Department of Ecology or U.S. Environmental Protection Agency and later submission of a site investigation or remediation report to Ecology, then an independent, qualified consultant should normally be used to satisfy agency quality assurance requirements, to ensure credibility with the agency, and to comply with agency report format requirements. For example, if the department intends to submit a report pursuant to Ecology's "Independent

Remedial Action Program" (IRAP), then a qualified consultant should probably be used.

6. ESAs Prepared by Non-City Parties

Given the possibility of bias in an ESA and/or remediation performed for a party other than the City, the responsible department should be extremely cautious in relying on the conclusions of such reports. The Environmental Protection Section of the City Attorney's Office and qualified City staff or consultants should be consulted to resolve these issues. Depending on the circumstances at the site, the department may want to consider performing an independent Phase I or II ESA.

B. Structuring the Transaction

The goal of due diligence is to limit these environmental liability, financial and other risks, not necessarily eliminate them. After the environmental baseline condition of the subject property has been established, and if one or more significant environmental issues has been identified, then City attorneys can work with department staff to evaluate the risk and provide counsel to enable department staff to determine: (1) the relative risks of pursuing the transaction; (2) if the transaction is pursued, how to allocate the risk among the parties to the transaction; (3) how to ensure that the City minimizes significant environmental liability; and (4) what is an appropriate price and structure for the transaction given department goals and the magnitude of the environmental risk.

Decisions on the acceptable degree of risk to the City as a result of a transaction will frequently need to be made by elected officials, based on recommendations by department managers.

How the transaction should be structured is fact-specific. Like determining the amount of site investigation, no hard and fast rules apply but judgment must be brought to bear. For example, in one transaction, an indemnification provision in a purchase and sale agreement may be critically important for the buyer, while in another transaction it may be more prudent for the buyer not to have an indemnification (and corresponding release) but to avail itself of statutory remedies under CERCLA or MTCA. Structuring each transaction requires exercising legal and policy judgments beyond the scope of this policy. For this reason, the Environmental Protection Section of the City Attorney's Office should be consulted at the outset of the transaction for guidance in drafting environmental provisions of the legal documents.